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## SPRING BLOOMING BULBS.

WITH the Autumn months come the preparations for bulb growing. The gardener and the grower of house plants must both give attention to the selection of bulbs and placing them in their proper quarters. These spring-blooming bulbs are very tractable in some ways, but in others very exacting. Their management is not at all difficult, and yet it must be conducted within well defined lines. Their wants are very much alike, whether tulip or hyacinth, or narcissus, crocus or snowdrop. The bulbs have rested during the summer months; while most other kinds of vegetation have been active, these have been having a holiday vacation. It is their way; no

amount of coaxing or persuasion or kind treatment will make them change their ways, and so we must give in and let them follow their nature. They believe in working with a will for nine months in the year and then going to sleep for three months. And now, here they are, all ready to begin operations if we will only set them to work. In the first place they will have to make some roots for themselves, for a bulb is not a root, nor has it a root, except potentially. It is a plant all but roots; stems, leaves and flowers all packed away in spheroid form ready to develop as soon as roots are formed in sufficient quantity to nourish and support them. We take the dry bulbs and set them in the ground where it is dark and moist, and soon the roots begin to push out and grow; the weather becomes cool and even cold, and yet while the frost does not penetrate the soil the roots continue to lengthen and strengthen themselves for work in the future, and this goes on all winter if the ground is not frozen. If it should freeze to the depth of the bulb or deeper

then growth would cease, although the bulbs have great vitality and power to resist the effects of cold. The bulbs would live but growth would be checked until milder weather prevails. If bulbs are planted late in autumn and very cold weather immediately, or soon, ensues and no protection is given, or not sufficient to prevent deep freezing of the ground, the bulb roots will make little or no progress until spring, and then they will not have time to become strong, and the result will be a weak growth of foliage and unsatisfactory flowers. The careful bulb planter strives to put the bulbs in, in good season, and then, in all severe climates, to protect them so that all through the

winter season the roots can form without interruption. A thick covering of litter and leaves will keep the frost out, and so make all snug for the cold weather. Now, it makes no difference about the necessity to first form a set of roots, whether the plants are placed in the open ground, or whether they are planted in pots and kept in the house. The time must be allowed for root formation, and while this process is transpiring the absence of light and a low temperature are favorable to it. If the bulbs are placed in the light and in a warm temperature as soon as potted leaf-growth is excited while there is no means to maintain it by a supply of soil nutriment, and the plant

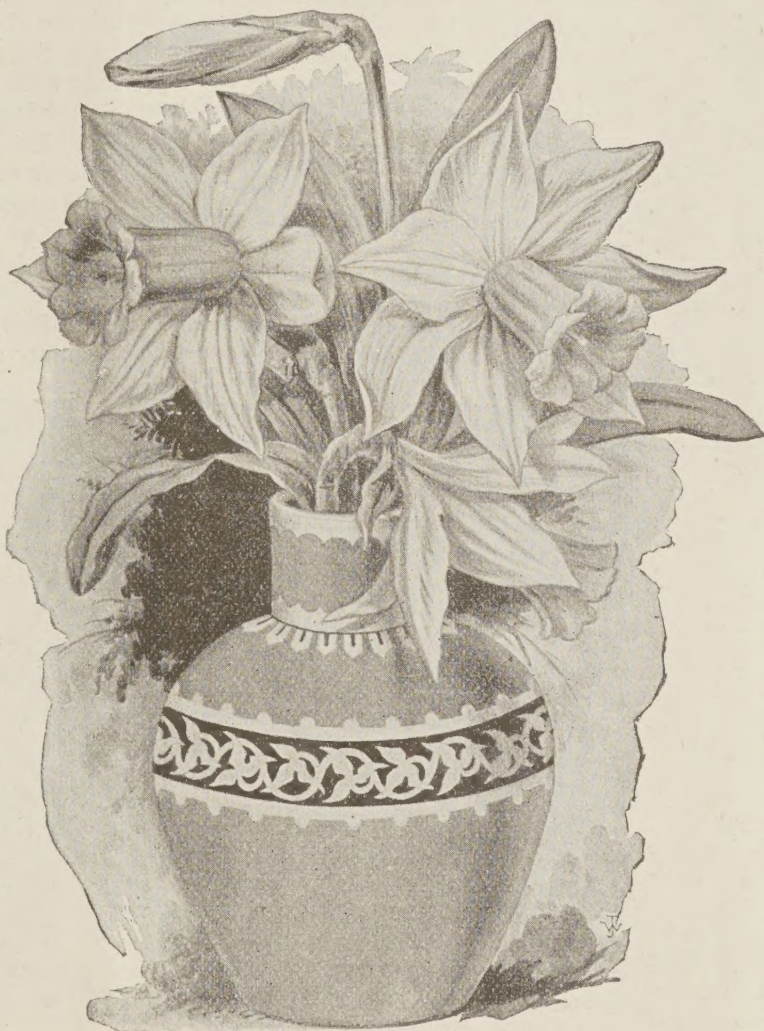
perishes, after exhausting its strength in a feeble growth and an abortive attempt at flowering. The main point, therefore, in the success of bulbs in house culture is to get a strong root growth before the bulbs are brought into light and heat. Bulbs potted and set away in a cellar where there is no danger of frost will take from eight to twelve weeks to make a supply of roots. They may then be brought to the light and into a temperature of fifty to sixty-five degrees; or a part of them can be held back in the cellar a few weeks, and brought out, a few at a time, to bloom at intervals. In some respects the narcissus is thought to be the most interesting of all the bulbs, on account of the great variety and beauty, and the pleasing fragrance of the flowers. It is a poet's flower and many have sung its charms, some in major and some in minor strains.

Ellwanger, in "The Garden's Story," in practical prose grows enthusiastic over it:

Herrick's Julia was born too soon. She missed Horsfieldi and many hundred others, among the beautiful New England daffodils. But

how much time she would have required to select a corsage-bouquet from the infinite number of nineteenth-century varieties, each one more bewitching than the other! \* \* \* The daffodil is a flower for everyone, and no spring garden is a garden in the full sense of the word without the grace and gayety it lends. Orchids are very well, yet they never seem to me to be a flower to excite special envy; we know they are beyond the reach of the masses, and that only a millionaire can grow them. Not so with the daffodil, which everyone can enjoy in moderation. Of all floral catalogues, a daffodil catalogue is the most exquisitely tantalizing. The further you read, the deeper the gold; and you are even met with

—Apples of gold in pictures of silver.—



NARCISSUS HORSFIELDI.—½ natural size.



Daffodils running the entire gamut from yellow to white. Daffadillies with trumpets flared, expanded, gashed, lobed, serrated and recurved. Daffadowndillies with perianths twisted, dog-eared, stellated, reflexed, imbricated, channeled, and hooded. Then the multitudinous divisions and classes: Hoop-petticoat daffodils, single and dwarf trumpets, white trumpeters, coffee-cups, tea-cups and tea-saucers, musk, scarlet and eucharis daffodils, jonquil-scented and rush-leaved, goblet shaped daffodils, polyanthus or

them aside from the foliage, except that the latter is a few days later to flower, and its trumpet stands out less boldly. Each exhales a rich magnolia-like odor; each flutters its fair white perinth and great golden corona over the luxuriant green foliage like some gorgeous butterfly, rather than a perfumed flower. Empress increases far more slowly than Horsfieldi. Its favorites claim for the former that it is better 'set up,' the perianth having more substance and the flower lasting longer. \* \* \*

Emperor is certainly a great variety, but infinitely larger in the English illustrations than in the American soil. Sir Watkin is scarcely so big as his name. Nevertheless, he is assuredly the largest of the flat chalice-flowers or tea-cup section, and keeps on increasing from year to year. We must not expect to raise daffodils two or three feet high as they can and do in England and Ireland, or grow them with trumpets large enough to serve the angel Gabriel. \* \* \* Ard Righ, Nobilis, Princeps, and a form of single telemonius are all distinct and desirable forms. \* \* \*

The big trumpeters and chalice-flowers are not yet over before the poeticus and polyanthus groups and the jonquils appear. How cool the snow-white corolla of single poeticus, and how warm the rim of its dainty cup! And who that has ever scented it can forget its delicious aroma? \* \* \*

The big and little jonquils—and even here the variety is great—concentrate more odor in their little cups than any other form of narcissus. \* \* \*

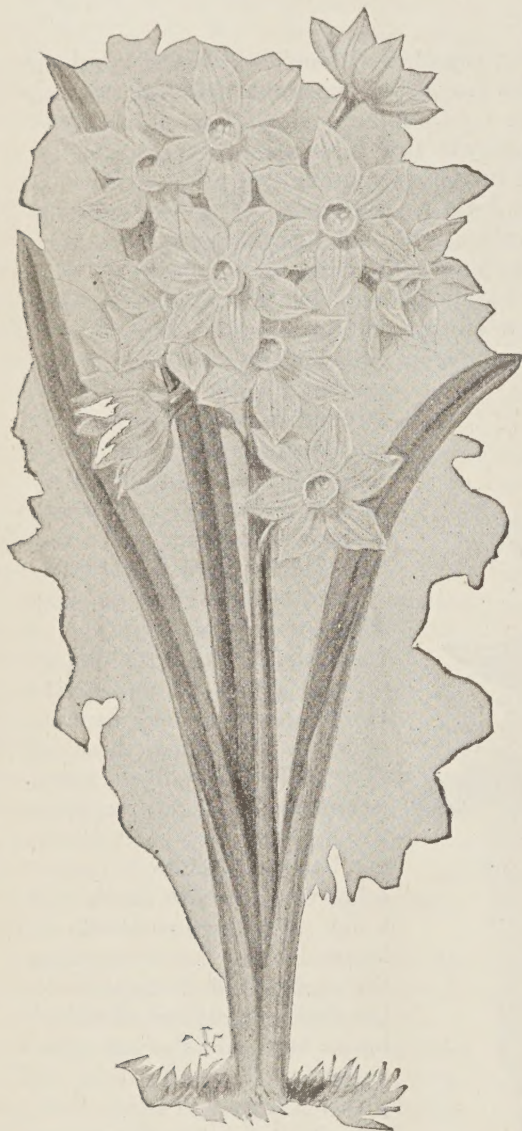
The depth at which daffodils and lilies should be planted is a disputed question. In light soils it is well to err in planting too deep rather than too shallow; in stiff soil they should not be planted at all. Very many of the daffodils require to be placed in new soil every year; weak foliage and decreasing flowers indicate that they require a change. Transplanting in either case should be effected so soon as the leaves and stalks have died down, during the short space the bulbs are at rest. To secure the finest flowers, they should be cut in the full-bud stage, and allowed to expand in water within doors. In England daffodils are taken up in July every year. James Walker, the largest grower near London, plants the bulbs in land that was manured for peas or early potatoes; a similar plan being adopted by the Dutch growers in their bulb culture. Sea-sand is very genial to daffodils; the Scilly Islands soil consists of but little else. Constant replanting in deep, pure soil is the plan in England now, although five years ago growers were all manuring the soil for them. In Holland all bulbs are lifted once a year. Fine crocus, hyacinth, and tulips do not grow themselves. The soil in Holland is dark sea-sand or alluvium. Cow-manure is largely used for ordinary farm crops, and after these have sweetened the soil it is dug over, two to four feet deep, and the bulbs are planted. Deep culture prevents their suffering from drought, and gives a clean round bulb. \* \* \*

For house culture some of the tazettas are very effective growers in the Chinese fashion, in water. Indeed, many of the narcissus, which force readily, may be grown in this manner. In China the tazetta is a favorite flower. The custom there is to place the bulbs in bowls of

water with pebbles, the latter being employed for the roots to adhere to. But to produce Chinese effects we must have the Chinese narcissus, a splendid species, with immense, vigorous bulbs. The bulbs should be started in their receptacle with water about five weeks before they are wanted to flower, and placed in the dark until root-growth is made. They may then be moved to the sunny window, requiring no further care beyond keeping up the supply of water. They may be grown in full light from the start.

But to follow Mr. Ellwanger the whole way would be a long distance, and although charming all along the route, some of our readers might find themselves in so enchanted a country as to loose their bearings and perhaps their home affiliations, and become daffodil devotees.

Referring to what is said above about blooming in water the Chinese narcissus, or as popularly called the Chinese Sacred Lily, we have at various times had equally as good success, by the same method of treatment, with the varieties Grand Monarque and Grand Soliel d' Or, but whether they would be as uniformly successful in all hands as the Chinese bulbs we cannot say. But all the Polyantha varieties do well in soil in pots. It makes but little difference with the plants whether in a sunny or a shady window, other conditions being right, but their great requirement is water, and that they must have plentifully. It is in this respect that the beginner with these bulbs is apt to fail.



NARCISSUS PAPER WHITE.  
½ natural size.

tazetta, early and late poet's daffodils, jonquils, double daffodils and how many more of the gilded host.

To add to golden numbers golden numbers!

Like most flowers, the daffodil is thankful for careful culture. It dislikes manure, preferring good loam and a liberal sprinkling of sand. Climate, however, is everything with it. It likes to usher in the season gradually, not hurry it as our spring wild flowers do. Mild winters, gradual warmth, and abundance of moisture during the early season suit it best. For many kinds our springs are too sudden, and the transition from frozen ground to almost tropical suns is too rapid. In England, from February, when daffodils begin to flower, until May, the climate hesitates between winter and spring, and this is what daffodils seem to like. \* \* \*

Among the bi-color trumpeters, Horsfieldi and Empress are incomparably king and queen. I confess I can perceive little difference between



NARCISSUS LEEDSII.  
½ natural size.

To really enjoy the narcissus one wants to raise a number of kinds, and both in the house and in the garden; and then if he have the taste to flavor the treat with the many beautiful allusions to this heaven-sent flower in classic mythology and English poetry, sentiment and sensuousness will combine in sincere gratification.



### SOME PRACTICAL POINTS IN BULB CULTURE.

**I**F we would meet the early snowdrops and crocuses, the gaudy tulip, and the princely hyacinth, with their companions, in the garden in the spring, we must become fall planters. Because autumn does not to many seem the right time for garden-making, no doubt many lawns and flower gardens are without these most charming flowers that otherwise would have them. There is no good

before they are occupied with the regular summer flowers. This state of things is oftener found in the handsome lawns of our towns and cities than in the country. It means one crop of bloom in the season, when with autumn planting the same beds could have succeeding crops, from early until late. Nor must we overlook the fact that of all our garden flowers, the sweet, beautiful Dutch bulbs, coming in the lovely springtime when nature draws us to the garden, excel all

With the hardy bulbs at our command, there is no excuse for not having an abundance of the most delightful flowers in our homes, during the winter and spring.

The first flowers of this section are the modest and welcome little snowdrops. No blossoms ever were more appropriately named, for they show their drooping heads usually before all the snow has melted. But the snowdrops are not without companions, for along with them



POLYANTHUS NARCISSUS.— $\frac{1}{2}$  natural size.

excuse for this, it is just as easy to make up and plant flower beds in September or October as it is in the spring. In fact it should be easier to plant in the autumn, because usually there is less crowding of work than in the spring.

The great value of the hardy bulbs in extending the season of bloom in the garden, makes it inexcusable not to have them in abundance. Without this class, the lawn and flower beds are bare of bloom for several months in the spring,

others in delightful qualities. And it is not in the garden alone that the advantages of this class of bulbs most strongly appear. Inasmuch as the season of bloom follows very quickly after warmth sufficient to start the growth sets in, they are matchless among flowers suited to home culture in winter; whoever can succeed in growing any kind of house plants may without hesitation undertake the culture of hardy bulbs in the window, for the culture of no others is easier.

appear the beautiful Glory of the Snow, or Chionodoxa, the winter aconite, Eranthis hyemalis, and also the crocuses. All of these are of the easiest possible culture in the garden. Fig. 1 shows a large pot planted with a dozen deep purple crocuses in the center, and outside of these a line of snowdrops. The contrast in the bloom is beautiful. To plant any of these early bloomers in pots in September, and then bringing them into the heat about New Years, will cause



them to bloom handsomely in the sitting room a week or two later. Some may even be placed in a warm place in December, and be had in flower by the holidays.

Right here we may as well say that there is no mystery about potting up and caring for any kind of hardy bulbs, to have them bloom in the house. By fig. 2, applying to hyacinths, but which will illustrate the care of all others, it may be seen that the treatment is really quite identical to that of the common out-door

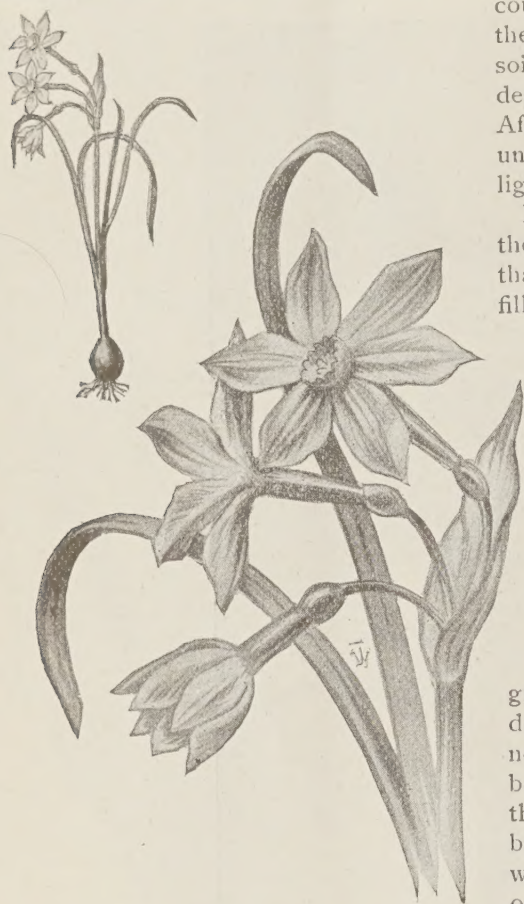
roots that growth and bloom proceeds so soon from all such bulbs after they come in contact with warmth and light.

Now the conditions that suit hyacinths or any other hardy bulbs in the garden, likewise suit them in house culture. Here, however, pots are brought into use, as shown in the middle section of fig. 2, in order that the bulbs may be moved about. The depth of covering, (in this case temporary,) that is suited to garden culture applies here also; it is the usual course to set the bulb pots one against the other, in a coldframe, and to apply soil, coal ashes, or other substance to a depth of about five inches over the top. After six or eight weeks, the pots may be uncovered and brought to warmth and light for blooming.

In starting hyacinth bulbs in glasses the treatment likewise approximates that of garden culture. Water is filled into the glass to barely touch the bulb in each case, and into which the roots will grow. To provide darkness and coldness, instead of covering the bulb with soil, as in outdoor planting and pot culture, the glass is simply placed in a box or elsewhere that will admit of being tightly covered with a board, as shown in the section to the right.

Fig. 3 annexed, illustrates several points in the garden planting of bulbs; one is that of securing evenness of growth; the other what may be called double-deck planting. The idea of evenness of growth is this: Take any number of bulbs of a particular variety, and the height of the foliage and flowers will be remarkably alike. But plant the bulbs with a trowel by making a hole for each one separately, and the chances are that there will be considerable variation in

recognizes the fact that whereas the larger bulbs, like hyacinths, tulips and narcissus, should be planted from five to seven inches deep, the smaller kinds such as crocus and snowdrops require only one-half of this covering. The season of bloom of the divisions named varies also. It is a good plan therefore, to plant the entire surface of a bed with larger bulbs, as shown at the bottom line of fig. 2, then fill in about one-half of the soil and plant the new surface with crocus, snowdrops



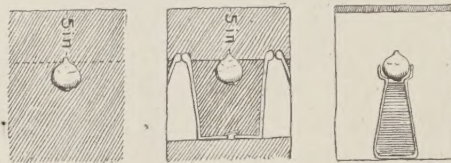
NARCISSUS JONQUILLA.

planting. Let us note the conditions: To properly plant a hyacinth the bulb should be covered about five inches deep, as shown to the left in fig. 2. At this depth two very important requirements are secured, namely, the light and surface heat are excluded from the bulb. This provides a congenial state of things for



Fig. 1, DARK CROCUS AND SNOWDROPS GROWN IN A POT.

inducing a full output of roots from the bulbs, before there is any top growth, an end always to be sought in hardy bulb culture of every kind. The growth of roots begins at once after the bulbs are set, and not many weeks are needed to give them a strong supply of white roots. It is because of this mass of full-formed



In the garden. In pot culture. Growing in glass.  
Fig. 2, HYACINTH BULBS SET IN THREE WAYS, NOT VERY UNLIKE AFTER ALL.

height when the flowers come to bloom. Now, to secure evenness in the beds, first throw out all the soil to a depth equal to the depth of covering; then place the bulbs at regular distances apart, over the bottom and cover them by returning the soil to the bed. In shaping up the surface to receive the bulbs, care should be

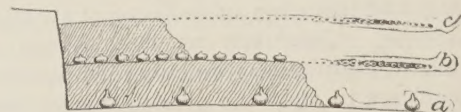


Fig. 3, EVENNESS IN THE BULB BED: DOUBLE-DECK PLANTING.

taken to have it even, for upon this the after evenness of the bloom will depend. The double-deck planting of bulbs



NARCISSUS ODORUS.— $\frac{1}{2}$  natural size.

and the like, just as though there was no other bulbs beneath. In the spring, then, there will first come forth a complete bed of the crocus class; following this, there will be a complete bed of the kinds from the deeper bulbs, all from the same spot.

To farther carry out the idea, fig. 4 shows a similar bed (the smaller bulbs



Fig. 4, SECTION OF BED OCCUPIED WITH TULIPS AND SUMMER BEDDING PLANTS.

omitted), occupied with plants of showy foliage during the summer. Any other kind of summer plants may equally well take the place of those shown. This is one of the ways, as referred to early in the present article, in which by the help of hardy bulbs, the season of floral beauty in our lawns, beds, and in the flower gar-



den, may be extended by several additional months.

If this culture may be instrumental in inducing many home owners, to double and triple crop their lawn flower beds, where heretofore such have borne but a single crop of bloom, the writer will feel that this effort has been to a good purpose.

\* \*

#### FRUIT NOTES.

On a small place there often seems to be no room for fruit, but after the experiment has been tried it will be found that sufficient small fruit to supply an ordinary family can be raised in a small space. Let your shade and ornamental trees be also fruit trees, and thus answer a two-fold purpose. Though my home is in a city of 30,000 inhabitants, we raise all the small fruit we use and often sell a good deal to our neighbors.

The main thing in the work of fruit raising, is to plant the very best varieties to be had and then care for them in a way to obtain the best results.

We cannot raise the ox-heart sweet cherries in this climate, so we have two young trees of Early Richmond; they are

low,—none selling for more than ten cents a quart. The first box was picked June 11th and the last one July 10th. There are about thirty varieties among them, some new ones being tested each year; a new bed is planted each spring and until this year has been allowed to fruit but once. This time the old bed was allowed to go another season, and it yielded considerable more fruit than the year old bed. The varieties which furnished the bulk of the crop were Greenville, Lovett's Early, Burbach, Timbrell, Marshall, Shuckless, and Brandywine. The Shuckless is a great favorite with us, being very sweet and it comes from the vines without the hull, already for the table. Had the whole bed been of Greenville and Lovett the crop would have been a great deal larger, as those two varieties were the heaviest bearers.

Before the strawberries are fairly gone raspberries begin to come; we have Hilbron, a black sort that does well and produces abundantly; Shaffer's a fine purple sort, which until the Columbian came out was considered the finest berry of its class. Lastly, the Columbian, of which too much cannot be said in praise; it is a beautiful berry, dark purple, very sweet, firm, small seeded and perfectly hardy; add to these good qualities the fact that the bushes do not sucker from the root, and its glory is complete. Of these raspberries we raise enough for our own use and generally sell a few boxes.

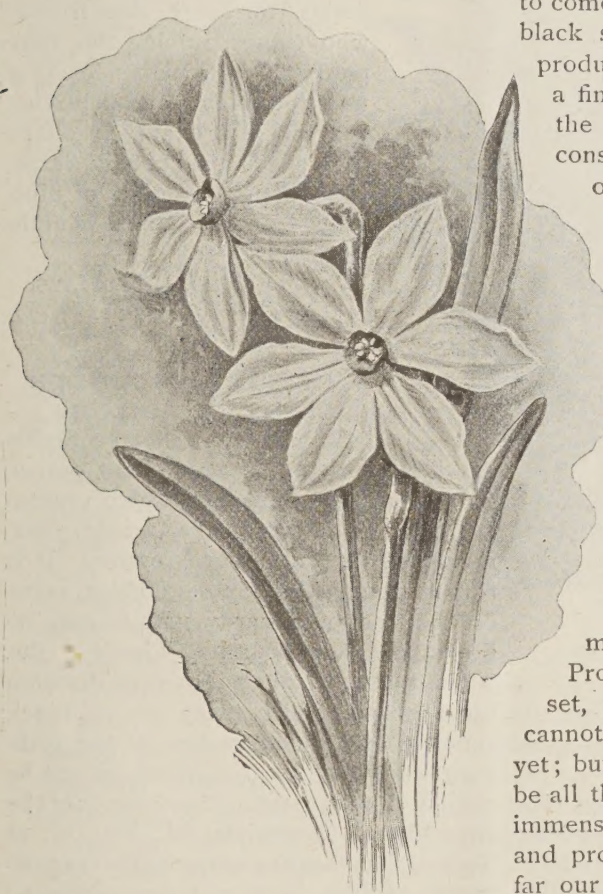
Of currants we have the common red and white ones, Fay's Prolific and some new bushes, just set, of Giant Ruby. Of the latter I cannot speak, not having fruited them yet; but of Fay's we have found them to be all that is claimed for them,—fruit of immense size, not so sour as the old sorts and produced in great abundance. So far our bushes have been very healthy and strong growers. The ordinary red and white ones all are familiar with; they yield well, stand any amount of neglect, except during the currant-worm season, when a vigorous battle must be kept up with sprayer and hellebore. Several quarts of currants were sold after saving enough for home use.

We also raise gooseberries and as so few are now raised for market, I had a hard time to save enough for our own use; the first one to whom I sold the ber-

ries spread the news and I could have sold ten times as many as our bushes bore. We have the Downing, a heavy bearer of good sized, greenish white berries; Smith's Improved, a very productive sort, with large, pale green fruit; and Golden Prolific, an extra fine variety bearing extremely large fruit which was the wonder of the neighborhood; this is the first year our bush of that variety has



DOUBLE ROMAN NARCISUS.  
2/3 natural size.



NARCISUS POETICUS ORNATUS.  
1/2 natural size.

bright red and very sour, but fine for canning. These two trees furnished us over a bushel of cherries, all we could use.

Strawberries come next and from two good sized patches we gathered 420 quarts—over thirteen bushels; eight bushels of these were sold to neighbors who came to the door for them, and brought in \$18.60. The fruit was so plentiful this season that the price was very

borne, but two quarts were picked from the little bush. The berries are never green, but always have a golden shade which gradually deepens until fully ripe; the bush has yellowish-green foliage and grows so differently from ordinary sorts that one can pick out the bushes among a thousand others even when without fruit. We are so much pleased with this variety that we shall plant several in the spring. All these sorts are entirely free from mildew with us. We have this year set out some plants of the new gooseberry, Pearl, from which we hope to gather great crops in the future. It is said to be a very heavy bearer of good sized fruit of excellent quality, a recommendation that will please every body.

We have several plum trees.

Of grapes it is hard to speak as there are so many sorts in bearing—about forty this year. I cannot say of any variety,



"this is the best one of them all," as among so many fine sorts it is difficult to make a choice.

Some Transcendent crab apple trees produce enough apples for jelly and pickles; a Whitney's No. 20 crab is now coming into bearing and goes so far ahead of the old sorts that they will be taken out and Whitney's put in their places.

A few apple trees are planted along the fence; Duchess, Wealthy and Grimes' Golden, part of which are now bearing.

This season some pear trees were set out as an experiment, this not being a pear country, only an occasional tree being seen fruiting and that for a very few years before it succumbs to our cold, changeable winters and hot, dry summers.

This fruit is all raised in a small space, but when proper attention is paid to cultivating and enriching the soil, a great deal can be gathered from such a space.

BERNICE BAKER.

Rockford, Illinois.

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#### EXPERIENCE WITH BEGONIAS.

I CULTIVATED begonias in a desultory sort of way several years before I awoke to a full appreciation of their varied beauties of leaf and flower. With a fuller acquaintance with them came the desire to grow them into the beauty which was their right. I think I have succeeded after long and patient experiment, and gaze with gratified pride upon my beautiful Rubra, bending its graceful limbs beneath its load of blossom, the Manicata aurea, spreading its large and glossy leaves with their beautiful creamy blotches and a happy, healthy family of more than twenty other varieties hanging full of blossoms and handsome foliage.

After much mixing of soils of various kinds, I find the best begonia soil to be made in the following manner: In the late summer when the earth in the woods is dry and loose, I go deep down in the rich light soil where the fern loves to toss aloft its plummy head and scoop up the rich surface soil. This is my "leaf mold." Down on the shores of the creek where the waters have fallen, leaving part of the creek bed dry, I find my "sharp sand." Back at home, on the surface of the old barn lot, long since tenantless, I find well rotted manure. The garden plot back of the house contributes its quota to the mixture. One-third leaf mold, one-third garden soil, one-third rotted manure, well stirred in a large box and sand added till the desired looseness of soil is produced. Then the plants are given pots according to size. Small plants in small pots, large ones in proportion. The pot is well cleansed to render it porous, and

the drainage hole opened so as to insure the begonia's chief requisite to good health—perfect drainage. The pot is then filled to one-fourth its depth with clean, dry charcoal. If charcoal cannot be obtained use half burned coals from your wood stove. Charcoal is much better than any other agent for drainage, as it also keeps the soil sweet. If charcoal be an impossibility, use broken crockery. Then place a layer of soil and tenderly shaking out the roots of your plant, fill in carefully till the pot is nearly full. When watered this will settle just right. If you are changing large plants from pots do not take the old soil all away from them,

the begonia family I can recommend President Carnot, coral red; Leonore, white; Nitida, pink; Olbia, lemon yellow; Rubra and Gigantea rosea. Noted for their beauty of foliage are Manicata aurea, with large glossy green leaves blotched with creamy spots, Albia, rich velvety brown and Speculata whose leaves are a perfect grape leaf. In the Metallica family are several very handsome members with their large plush-like leaves and pink and white plush-like blooms. The best of this family is Velutina, although Marguerita is very good. Thurstoni is an extraordinarily nice begonia, having the richest of coloring in its large smooth leaves. These begonias all start readily from cuttings and are of rapid growth. I have the Rex varieties also, but will not tell of them now. It is hard to know where to stop when trying to talk about begonias, as they are so many and so handsome. But as a last word I want to ask begonia lovers to keep their old plants; so many

content themselves with cutting off the old plant, and throwing it away as ugly and straggly looking. Of course it is when you ruthlessly cut off "slips" for every "dear friend" who comes, ruining the symmetry of your plants, losing a wealth of bloom and depriving yourself of a beauty in shape of a specimen begonia, large, well shaped and full of blossoms, than which there is nothing handsomer.

MRS. I. M. HAYS.

Centralia, Mo.

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#### VEGETABLES UNDER GLASS IN ARIZONA.

Would it not be a profitable undertaking for a competent person to engage in raising garden vegetables of certain kinds, under glass, near Phoenix, Tucson or Prescott? It is true that many of the vegetables, especially those of a hardy nature, may be grown the year round at Phoenix. But when quality is taken into consideration those grown under glass are so much superior that once partaken of, the ordinary kinds grown out of doors can not be compared with them. The director of the Agricultural Experimental Station at Tucson has been making some experiments of that kind and has achieved marked success. Lettuce of several varieties attain large size and were so crisp and tender and had such a delicacy of flavor that they would not be taken for the same varieties grown in the open ground. The size, too, was remarkable, single plants weighing as much as two pounds. The same is true respecting tomatoes grown under glass. The raising of vegetables, of certain kinds, under glass, is sure to increase. In many localities a supply will find a waiting demand



SINGLE EARLY TULIPS.

Bride of Haarlem. Vermillion Brilliant. Duchesse de Parma.  $\frac{1}{2}$  natural size.



## FLOWERS OF THE SUN.

**A**N apology for the coarse presence of that great yellow blossom, whose broad smiling face seems to reflect the sun's rays and to follow its course, is that it destroys or absorbs noxious odors and gases. Thrifty poultry keepers also plant long lines of this sun-worshipper for its seeds, which they feed to their young chicks. But it is upon the smaller and slenderer perennial sunflowers, above which this useful Russian towers like a giant, that we depend for decorative copies of the sun. If planted in groups among shrubbery their flowers sustain the cheery glint of yellow until late in autumn, even after the plumes of golden-rod are frayed into a tawny, frowsy fringe.

We have many native sunflowers with which the foreign species can be mingled and naturalized in very neighborly fashion. The trivial differences in damp and dry, rich and poor soils, their robust growth seems to ignore, but it does unfailingly demand a situation where it can pay continual homage to the sun.

I cannot agree with *The Garden* in pronouncing *H. Maximus*, the Great Perennial Sunflower, the most beautiful of them all. Showy and handsome it certainly is at a distance, but is so coarse that it can hardly be used at all for cutting, and this is one of the chief uses of the smaller perennial sunflowers. My favorite is *H. Maximilianus*, of graceful, wand-like growth, with small, vividly colored blossoms. This planted with *H. doronicoides* in masses in shrubbery, borders or grass, in autumn will form sheets of golden yellow flowers worth walking miles to see, and will supply cut flowers by the barrow-load for church or hall decoration. *H. doronicoides* is one of our native sorts. Its small, golden yellow flowers are very light and airy in effect, but the leaves are rather coarse for planting close to a border.

*H. multiflorus plenus* has become such a general favorite that it is frequently grown in pots and along greenhouse benches. The flowers are as double and as beautifully formed as those of an aster, so that we need not weep over the dingy, undecided color of the "yellow aster's" own flowers. The blooms are beautiful for cutting and remain fresh for a remarkably long time.

*H. orgyalis* is of unusually elegant habit. It grows ten feet high sometimes, and its leaves are long and slender, like the willows. The latest blooming of all the sunflowers, its blossoms nod gayly from the tips of the stems, high up in the air, late in October.

Some of the newer varieties of *helianthus*, including *H. cumonmerifolius*, and

Miniature, I have noticed as being very bright and pretty, but have given them no special attention as yet.

L. GREENLEE.

Garden City, N. C.

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## SPRING AND SUMMER IN MY GARDEN.

**A**UG. 29th. In a garden close by, belonging to my sisters, are some plants of the yellow aster so-called, a poor flower in my opinion. The large outer petals are white, and the yellow center, not very bright, consists of the disc florets such as you see in all single asters, grown longer and faded out somewhat. The aster tribe is cyanic, that is, any aster may be red, white or blue, or any tint of these colors, but never yellow, and it is doubtful whether a really yellow aster

set last spring, which came out in June has only just faded, though it finally became a lighter yellow. With the older flowers so durable and new ones coming every day there is a great show of orange bloom at last; a rich constellation of yellow stars. If it proves hardy it will be an acquisition. It has 104 blossoms on it to-day, and many have been cut for bouquets, besides the one that has faded.

Some time ago I sowed the woodruff or woodrowel, *Asperula odorata*, a little plant wild in England. The seed lay in the ground a year before it grew, and it has stood in its present place two seasons. Its foliage is beautiful dark green, and shining, made up of whorls of narrow leaves an inch or so apart; its dried herbage is very fragrant, about the same as the smell of sweet clover (*Melilotus*).

It spreads somewhat, so there is a solid mat of foliage six inches or more deep, very hardy and early to start in spring. I have not yet seen its flowers, but it is well worth growing for its foliage alone. Its flowers are small and white, I am told, and are pretty, for ought I know, but I partly guess the graceful and fragrant foliage is its main point.

Set the *Sedum spectabile* if you want one of the most distinct and picturesque of plants. About two feet high, with many stout stems from one root; the stems and the thick, large leaves are about the tint of a garden-pea pod. The level-topped cymes contain hundreds, I almost said thousands, of pale red flowers of the same structure as those of the *Echeveria*, live-forever and other members of its family, much intermixed for a while with light green pointed buds. The flower heads are six inches across some of them; my plant, now in its second season, has twenty-one of them and it flowered well the first year.

It has no seed I think, and so far does not spread by offsets, is perfectly hardy and of the earliest culture. It starts early in spring and flowers a long time. You cannot fail to be pleased with it.

E. S. GILBERT.

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## AN INJURED EVERGREEN.

Where the terminal bud of an evergreen is killed, thus injuring its leader, cut the leader back one-half last year's growth, and choosing the most desirable upper side branch, draw it upwards gently as far as you can, and tie it to the stump of the old leader. In the fall the balance of the old leader may be cut out. When the trees make their new wood during the summer, they make it in the lines set by the position of the branches at the time, and next spring all strings and harness may be removed for "as the twig is bent the tree's inclined."—*W. C. E. in Gardening*.



HELIANTHUS MULTIFLORUS PLENUS.

will ever be brought forth. Nature allows us to create many variations within certain limits, but a bright yellow aster or phlox will never be permitted. Some of my red Vick's Branching asters this year have dark crimson stalks and stains in some of their petals, something like the picture of a spotted aster called Harlequin. Should they conclude to become of this color altogether they would be richly tinted, the darkest red aster perhaps ever seen.

The Star petunia is a pretty little thing; a dwarf plant, small in all its parts, with regular, velvet, crimson flowers an inch or so across.

The *Heliopsis Pitcherianus* is a better flower than I at first thought. The duration of its flowers is phenomenal; the very first blossom on the mailing plant



## BULBS.

I NEVER tire of writing or talking about bulbs, and yet what can I say that has not already been said? Nothing perhaps, yet what I say may possibly reach a new reader. I find many people with whom I converse on the subject of bulbs, lamentably mistaken in their ideas—if they have an idea—on the culture of them; people who have successfully grown other plants years.

Somehow there seems to be a well established belief among people that bulb growing is something very difficult; that there is a mysterious something about it, known only to a favored few; while in reality there is nothing in the plant line so easily grown, so sure to bloom. I think among all the bulbs my favorite for home culture is the hyacinth, preferably the single varieties.

Trusting this may fall under the notice of some one who has never grown bulbs I will give my method of treating this bulb: If the price to be paid is an object, and it is to most of us, buy mixed bulbs, they are every whit as good as the named ones, the only objection to them being the fact that you cannot tell one color from another until they bloom, or at least until the buds are well developed. And this is not a very serious objection, as the bulb will bear transplanting, when the buds are well formed or even when in full bloom. Sometimes you can purchase the unnamed kinds in separate colors. Thus the white will come in one package marked "white varieties," all the shades of blue, including pale lavender to almost black come marked "blue shades"; while everything from palest pink to a deep dark red, comes under the head of "reds." The yellows, of which there are very few shades, and they are hardly more than a cream color, will come marked "yellow shades." This simplifies matters a little, for one can tell somewhere near what is being planted.

To be slangy it has a flavor of "chestnuts" to say buy "good bulbs" of a reliable firm. Buy of a "reliable firm" and you will get good bulbs. Give them intelligent treatment and your success is assured. Having decided what firm to patronize, send in your order early, just as soon as you get your bulb catalogue which will probably be in September. Or borrow somebody's last year's catalogue and order from that. If it is your first order there will be nothing in the new catalogue you will want, for there will be but few things advertised in it that are not in last year's book, and those will be novelties, and beginners do not want to test untried plants.

Roman hyacinths are the first to bloom, and if planted in September will be in bloom for the holidays. Now I am going to say something that may sound extremely foolish to the experienced bulb growers, but as it is something I have to say about every time I give away a bulb, and what I had to explain no longer ago than yesterday, I will venture to say it here: Don't plant your bulbs upside down. The bottom of the hyacinth bulb is slightly flattened, with a small raised ring, around which the roots start, plant this side *down*. The crown or top of the bulb is usually a little pointed, and this top or point should be just about even with the top of the soil when planted for house blooming. Garden planting is quite different.

Now for soil! Ordinary garden soil,

out of it, and ruin is usually the result. Corn cans make good hyacinth pots when one wishes to plant singly.

After the bulbs are potted water well, and place in a cool, dark cellar. Keep them there from four to eight weeks, look at them occasionally and if the soil is dry, water it, and when the tops are an inch or two high bring them to a light, cool room. Do not let them have any sunshine until the flower bud is well up out of the bulb and you can see at least one inch of stem below the cluster of buds. After that give them sunshine until the buds open, then if they are placed out of the sunlight the blossom will last longer.

When you receive your bulbs, divide them into three or five lots. Plant the Roman hyacinths and one lot of the others at the same time. The Roman will bloom first, and by the time they are out of bloom the others potted at the same time will be blooming. The other hyacinths should be planted at intervals of two weeks after the first planting. This method will prolong the period of bloom. Or the bulbs can be all planted at one time and will all bloom at about the same time, lasting two or three weeks according to whether they are kept out of or in the sun. To hasten the blooming of a hyacinth, after the buds are well formed, place the plant at night on a table near a lamp left burning all night. E. D. B.

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## FALL SOWN FLOWER SEEDS.

BUT few flower lovers seem to realize the great benefit to be derived from sowing the seeds of many varieties of our hardy annuals in autumn. The phlox, poppy, sweet pea, Indian and Chinese pinks, etc., are much finer if sown in the fall, commencing to bloom much sooner in the spring and flowers are produced more

abundantly and are finer and larger in every respect. Another advantage to be gained by sowing a portion of our seeds in the autumn, and then making a second sowing in the spring, is that the blooming period can be greatly lengthened of those varieties which bloom only for a short time, such as the poppy, thus enabling one to enjoy their beauty for a greater length of time.

The finest sweet peas I grow are always produced on plants from seed sown in the fall; commencing to bloom during the cool weather of early spring the flowers are fully one-third larger, and the vines are literally covered with flowers. I generally make two fall sowings of sweet peas, the first I plant about the beginning of October; sown at this time the seeds soon come up, and in a short time make stocky



HELIANTHUS DORONICOIDES,

not too rich, and if heavy or clayey use one-third sand or leaf mold to two-thirds garden soil. Please yourself by potting singly or potting a dozen bulbs in one pot or box if large enough. Use something for drainage, a few little stones, some bits of broken flower pots or dishes or bits of charcoal. Fill pot nearly full of soil, give a good smart shaking to settle it, but do not press it down. Now make a cavity for each bulb by drawing the earth aside not pressing downward; into each cavity put a teaspoonful of sand (more if you have it), on this set the bulb, draw the earth around the bulb and press firmly, remembering all the time not to press the bulb down hard into the soil beneath. The reason for this is, the roots of the bulb start from the bottom, and if the soil beneath is hard, the bulb is thrown up



little plants, which are allowed to sprawl around on the ground; just before severe weather I protect the plants with a mulch of two or three inches of straw or coarse litter, covering them and the soil for two or three feet on each side of the row. The mulch must not be put on so thick as to smother the plants, just enough to protect them from severe winds and the effects of the sun; where they can be procured, evergreen boughs are excellent for this purpose. Plants so protected always winter safely, and are ready to begin growth as soon as the frost is out of the ground in the spring. As they are well rooted and established, they grow off very rapidly and are in full bloom at least six weeks before flowers are produced on plants from spring sown seed. The other sowing I try to get into the ground just before it freezes up for the winter; the seeds, remaining dormant during the winter, are ready to sprout and grow at the first approach of spring, and are generally up a week or so before the soil is



HELIANTHUS MAXIMILIANUS.

dry enough to work. Every lover of this beautiful flower, and especially those living in the south, should try this method, and they will be surprised at the wonderful perfection the flowers will attain.

Poppies grown in the same manner are also incomparably finer than from spring

sown seed. In the south all hardy annuals should be sown in the fall. If planted then all will attain great perfection, but if sown in the spring, unless planted extremely early, most of the hardy annuals will fail to give satisfaction in most parts of the south.

MARTIN BENSON.

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#### NOTES.

House plants need and must have fresh air, but beware of draughts.

For winter culture procure a few Giant odorus jonquils. Plant three or four in a five-inch pot, and revel in their "sun-shiney" sweetness.

Scatter poppies over the vegetable garden, particularly in the center of hills and in the drills where beets, carrots, parsnips and other vegetables are grown.

Plant annuals in the bulb beds. The new Giant nasturtiums, verbenas, petunias or marigolds are fine to cover bulb beds. They brighten what would otherwise be an unsightly spot and they keep the soil cool and moist.

Young seedling and newly rooted slips cannot be forced into strong, healthy plants by frequent doses of plant food or liquid manure. But well grown plants, not thus treated will, when budded, bear a great deal of such treatment and be all the better for it. But young plants will grow too rapidly, if they are not killed outright.

Grow fragrant leaved plants in your garden. Small slips of rose geraniums, planted out in good rich garden soil soon make plants from which you can take branches and not miss them. Lemon verbenas are an old time favorite, with fragrant foliage. Ambrosia, a very old, old plant that has been masquerading as a novelty, (which of course it is to those who do not remember their grandmother's garden), has a refreshing fragrance, forcibly reminding one of the fir and pine woods when the sun is shining with noontide heat, or as it sometimes is after a shower.

Be sure to give the spring blooming bulbs a nice warm winter blanket of leaves, litter from the stable, or brush, or a combination of all, and do not be in a hurry in spring to get them out of their winter clothes. Don't rush out the first warm day and clear away all the brush and litter just because it is unsightly looking. The crocus and snowdrop will not need so warm a covering as the other bulbs and can be uncovered earlier in the spring. But from the tulip, hyacinths, etc., gradually remove the covering, leav-

ing the finest of the stable litter on the beds permanently.

Mammoth yellow crocus, has many good points. It blooms in clusters of from six to twelve. It seems almost incredible that such small bulbs, scarcely



HELIANTHUS ORGYALIS.

larger around than a nickle could hold so much brightness. They are very early, very showy and very hardy. When mine first bloomed in the early spring, a cold wave swept down upon us and froze the ground quite hard. I think one day it did not thaw, all that day the crocus flowers curled up, and drooped their heads, but when the sun came out warm and bright next day, they came up smiling, and as "goldenly" beautiful as before the freeze. The secret of blooming this bit of brightness in the winter is to keep it in a cool, moist atmosphere. Heat, dry air and dust will blight them. The crocus needs, as do all other bulbs, plenty of water while in bud and blossom. X.

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MORTGAGED FARMS.—Out of each thousand farms in the United States, only 282 are mortgaged, and three-fourths of the money represented by the mortgages upon the 282 farms was for the purchase of those farms, or for money borrowed to improve those farms.—*Secretary of Agriculture.*





DOUBLE TULIPS.  
Murillo. Crown of Roses

#### A PRETTY WINDOW GARDEN, AND HOW TO KEEP IT SO.

**N**OTHING in the way of artistic room decoration, is more restful or pleasing than a few handsome foliaged or bright blossomed plants. Nor does anything more quickly give a tone of distinction to a room than the character of its plant decoration. Fortunately there is so great an abundance of plant material adapted to such situations, from the stately palm, to the bright geranium, and winsome primrose, that every taste can be suited, and the aspects of the room become stately, cheerful, or gay, as is most in harmony with the taste and disposition of the owners. With friends to suggest, and florists and catalogues to guide us, almost any of us can get a handsome collection of plants together, but keeping that collection in presentable condition—ah! there is the rub!

How many of us, whose plants were the pride of our hearts, in the middle of October, when we brought them to our windows, have seen them grow gradually flowerless, ill-kempt, and forlorn, until by Christmas not a vestige of their former beauty remained, and by spring they were but the ghosts of the specimens we started with! It will not do to lay the blame solely upon the heat, dust, and insects, disheartening as that trio of ills may be, for other people, under exactly the same general conditions, have had blossoms by the handful all the fall, winter and spring, and their plants have been pictures of thrift and vigor the whole time. What have they done, that we failed to do, to accomplish this end?

Well, first, they were careful to place in the sun such plants as require sunshine for development, giving their less particular plants the shadier shelves and corners. Had we been as solicitous we too might have had roses, heliotropes and geraniums all the winter through. Then again, they have liberally patronized the dealers in fall bulbs, that grand class of plants that will bloom when the time comes, in spite of every hindrance, and they have thereby reaped a mid-winter reward of magnificent hyacinths, rainbow-hued tulips, and spicy narcissus. Our

bulb catalogues, alas, lie in the wastebasket where we tossed them, unread. Those successful growers have not given a drizzle of water to thirsty plants, nor deluged anew those standing in wet soil. They have stirred the surface of the soil whenever a crust began to form, they have picked off every dead leaf and withered flower, and killed the first stray insect that appeared, before it had time to increase into a horde. Above all, they have kept their plants clean. We have not tolerated an unwashed dish or an unswept corner in the house, but our plants have caught the impalpable dust ever afloat in a room's atmosphere, until each leaf is covered with dust as with a coat. Yet in vain has been their mute appeal to us to have that covering removed that the little orifices of the leaves may breathe and so keep up their life and vigor. Thus, in place of our neighbor's wealth of greenery, and beauty of bud and bloom, we have our unwashed and unshowered plants, with seared and yellowed leaves, and blighted blossoms, over which the ever-ready insects,—that pounce upon ill-tended plants as the vulture upon carrion,—have held high carnival.

'Tis never too late to mend. Let us tack a strip of oilcloth or linoleum under our plant stand that we may not stand in mortal fear of a drop of water falling upon our best carpet. Then bring in a tub or pan of water, and souse and shower them until they are clean and free from every

crawling aphid or plant louse. Once a week let us repeat this vigorous measure, not forgetting in the meantime to look after the details of watering, turning, placing in the sunshine, etc., that seem so little in the telling, but effect so much in the doing. My word for it, we will soon be in possession of plant treasures that a florist might well envy.

LORA S. LAMANCE.

Pineville, Mo.

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#### THE JONQUIL.

**T**HE species and varieties of *Narcissus* jonquilla, are popularly known as "Jonquils" and possess many points of similarity with the small flowered section of that very extensive genus. Although they do not present a great variety of colors, yet they are highly prized for their charming, golden, fragrant flowers, which are freely produced. They are perfectly hardy, and may be successfully grown by any one in either the flower border, greenhouse or window garden. And as the bulbs can be procured at a very moderate price, they well deserve all that can be said in their praise.

The bulbs can be planted any time from September to December, although it is best to plant them as early as possible. In potting let three or four bulbs, according to their size, be placed in a four-inch pot, and if large masses are wanted, larger pots or pans, and more bulbs can be used. In potting let the pots or pans be properly drained, and use a compost consisting of two-thirds turfy loam, one-third well decayed manure and a fine sprinkling of bone dust. Mix well and use the compost



LATE ROSE TULIPS.

rough. In potting fill the pots or pans to within three inches of the top, then set in the bulbs, keeping them a few inches apart, and then fill to within half an inch



of the top. Water thoroughly and place in a cool dark cellar to make root, watering when necessary. In about six or eight weeks after planting, or as soon as indications of a vigorous top growth are noticed, a few of the most forward can be started into growth by placing them in a light, sunny situation where an average temperature of 55° is maintained, giving water freely and as much fresh air as possible. Keep the plants free from dust, and remember that the flowers will last a long time if given a cool temperature when fully expanded. By starting a few of the most forward into growth at successional intervals throughout the winter a continuous bloom may be enjoyed.

After the flowers decay remove the stalks, and as soon as the foliage commences to turn yellow gradually reduce the supply of water, and when the leaves have mostly decayed, remove the plants to a cool, light part of the cellar, or else place them underneath the greenhouse stage, where they may remain until fall, when they should be removed from the pots and the larger bulbs be re-potted for another season's bloom inside, while the smaller can be set out in the mixed flower border. I, however, advise the purchase of a fresh supply for inside use, as they cost but little and the result will prove much more satisfactory.

When grown in the mixed flower border, they should be given a sunny situation, a good soil, and during the winter months a mulch of coarse, strawy manure, which can be removed in the spring. In the flower border the bulbs do best when planted during October, and they should be set in groups of eight or ten, keeping the bulbs a few inches apart, and covering to the depth of four inches. Here they may remain for four or five years, or until the bulbs commence to touch each other, when they should be carefully taken up, divided and replanted as above advised.

**NARCISSUS JONQUILLA.** The single jonquil is a well known favorite, with rich yellow, fragrant flowers, and is an early bloomer in the flower border.

**N. JONQUILLA FL. PL.** The double jonquil, has heads of small, but very double, yellow, sweet scented flowers. It is good for forcing and very desirable for the flower border.

**N. ODORUS** is popularly known as the Giant odorus jonquil or Campenelle. It is fine for forcing, the large six-parted yellow flowers being deliciously scented. From four to six blossoms are borne on a stem.

**N. RUGULOSUS** is the so-called Giant

jonquil or Improved Campenelle. It has broadly imbricated petals and a large wrinkled cup. Flowers deep yellow and very fragrant.

CHAS. E. PARNELL.

Floral Park, N. Y.

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#### PRESERVING DAHLIAS AND OTHER TUBEROUS ROOTS.

THERE are so many failures in storing dahlia tubers, that their successful preservation is regarded by many as a sort of trade secret, which conclusion is altogether at variance with the facts in the case. This problem of winter storage prevents many an ardent admirer of this

into winter quarters, perfect in every respect. Their place of storage, a dry cellar, perfectly frost proof. It goes without saying, that the tubers must be fully matured when dug. Failure in this respect is a fruitful cause of shriveling, a common complaint, and no cause for it aside from carelessness in starting the tubers in due season. In my estimation they are as easily grown as a potato, sturdy growers, responding generously to even half-way culture, and loading themselves with bloom in return for a weekly soaking with soapsuds.

The tubers should not be cut or broken in lifting. Allow them a long ripening season, mulching well with dry material and heaping it close around the stalk to protect from light freezing. Dig just before the ground freezes, cutting around the clump with a spade, then lift carefully with all the soil that will cling to it.

If the soil is wet, it will hang on all the better. Set the clump in a sheltered place to dry thoroughly,—a porch where the air and sun will strike them, is a good place,—protecting well at night. The better way is to place at once in the boxes in which they are to remain, and dry out as directed. This process encases the tubers with a veritable preservation coat, impervious to atmospheric effects. If the tubers are not wholly covered with clinging earth, take sufficient garden soil and dry it thoroughly, either in the oven or in the sun. Fill in the boxes till the tubers are perfectly covered.

A very loose soil will sometimes fall away in digging, thus leaving the tubers exposed. In this case, put a layer of the dried soil in the box, lay tubers upon it, cover with more dry soil, and pat down firmly. Sprinkle the surface with water till quite moist, pat slightly and dry in the sun. This forms a protective surface, keeping the tubers in good condition until ready to plant in spring.

Cannas may be successfully preserved in precisely the same way, leave the clumps entire, separating in the spring.

Gloxinias and tuberous begonias should be left in the pots in which they have bloomed, without disturbing them, thus protecting them from atmospheric influence. If tuberous begonias are bedded out, treat them in the same manner as directed for dahlias.

Gladiolus, montbretia, and similar bulbs, should be left in the ground as late as possible without freezing, then dug, and spread in the shade to dry. Finally, cut off stalks to within an inch of bulb, and store in open boxes in dry place, secure from frost. These directions are simple and easy to practice, and those who follow them, using good judgment, as should be done always, will be amply rewarded by results.

MRS. A. H. HAZLETT.



SINGLE EARLY TULIPS.  
Van der Neer. Wouwerman.  
½-natural size.

autumn flower from investing; and for this reason, I want to give you my method, wholly successful, and as simple of adoption as it is efficient. After trying dry sand with varying results, paper sacks and pasteboard boxes with shriveled and mildewed effect, I consider this way the very best for the amateur without professional facilities for maintaining a uniform temperature. At this writing, February 13th, I find dahlias and other tuberous stock, upon a careful examination, to be as plump and firm as when they went



## SEED PODS.

Freeseias and lachenalias are a good investment. They can be forced year after year, without diminishing their flowers.

Shallow planting, consequent winter heaving, freezing and summer scorching are some of the commonest causes of failure with bulbs.

Have you a sod-heap piled up somewhere to decay over winter? There is nothing like it for mixing in all sorts of composts. It makes a rich, mellow fibrous loam such as all plants love. Roses are especially fond of it.

Half decayed leaves—never fresh ones—are the best mulch that can be found for bulb beds. These need not be raked from the bed in spring like other mulches. Left upon them they add an element of fertility that bulbs are very fond of, and the tenderest shoots can push up through them very easily.

For bulbs that are not quite hardy, such as ixias, sparaxis, babianias, tritomas, etc., a coldframe is a great institution. They can be planted in the pansy frame deep enough so that when the pansies are lifted out in spring the bulbs will not be disturbed. Calochortus, freeseias, and that little beauty *Gladiolus Colvillei* also bloom well when planted in this way. It saves the trouble of having so many pots around, in cellar and sitting-room. The bulbs suffer less from neglect and give really finer flowers. The sparaxis is a very curious little plant and increases rapidly. Do not throw the dried stems away when they fall from the bulbs. If you will husk out the joints you will find a cluster of little bulblets around each one.

The glorious flowers of the Japanese iris will repay a little extra trouble in planting the roots. We have one splendid bed before us as an object-lesson. In preparing it last fall the soil was dug out for two feet and the trench filled nearly to the top with dry leaves. The rich loam spread above the leaves packed them down so that with about a foot of soil upon the leaves the surface of the bed was still several inches lower than the

surrounding surface. Later in fall we spread five or six inches of fresh fertilizer from cowstalls over the bed. Next spring before and during the time of flowers we kept the bed soaked with water. The leaves held the moisture below the light soil without allowing it to sour, and oh, what grand flowers we had! Near to this bed we have English and native iris in large clumps. The form of these I shall always like best. Kaempfer's iris is bigger and brighter, but not bonnier.

Now that we are all planting bulbs let me put in plea for the snowdrop. What

bulbs need only to be planted and then let alone. Under ordinary conditions they soon naturalize themselves. The individuality of the snowdrop—originality, if you will—has made it the subject of many poetical references. All are not equally accurate, however. Tennyson evidently noted the small white flowers carefully, for he wrote:

"Pure as the virgin tint of green,  
That streaks the snowdrop's inner leaves."

For the snowdrop is not pure *white* as some poets would have it. They, I fear, love it better than our gardeners. To find snowdrops in Carolina gardens is the exception rather than the rule.

Nothing could be prettier for naturalizing in little colonies along shaded walks than some of our wild bulbs. There are the trilliums, white, pink and purple. Plant their thick root stocks moderately deep in a woody soil and a shady place. They bloom early and are beautiful and plentiful when other flowers are scarce. The dainty little dicentras have tubers not much larger than peas. Their leaves are lace-like, and their queer, two-lobed flowers are borne in pretty sprays. People may exclaim at the squirrel corn and Dutchman's breeches planted along your border, but they cannot fail to note the beauty of the flowers also. The spotted leaves of the erythroniums are handsomer than many of our foliage plants and the nodding lemon yellow flowers have a very cheery aspect. But my favorite among all is the little spring beauty,



HYBRID IXIAS.— $\frac{1}{2}$  natural size.

other bulb have we that is so pure and dainty, so brave and early, so easily cultivated? A little colony of the bulbs, planted in a sheltered nook will often surprise the owner with a handful of sweet, white flowers in January, notwithstanding the old hymn that

"The snowdrop in purest white array,  
First rears her head on Candlemas day."

Scillas, chionodoxas, crocus and aconite bloom about the same time as the snowdrop and might be planted with it for variety, but I shall always want one little colony that is all white. Elwesii giant is the finest of the snowdrops. The

Claytonia Virginica. Its button-like tubers seem to grow best in a sunny place, and soon hold their own even with the crabgrass. When we have planted a few more borders in this way it need not be necessary to blister one's nose, and muddy one's boots trudging for miles in the sun

"To see the bath flowers' bell of snow,  
The pink arbutus, and the low  
Spring beauty streaked with red."

A cardinal point in the culture of lilies is to keep them under ground. Order the bulbs early, so that they need not remain long in the importer's storage room; plant them as soon as they are received, and never in subsequent transplanting allow



them to remain one minute longer above ground than is absolutely necessary. Frequent removals of lilies are to be deplored. The bulbs should not be disturbed so long as they flower satisfactorily. Root growth for another season begins as soon as the tops die down. The hardiness of lilies is usually over-estimated. As a general thing they suffer from shallow planting and often the necessary winter mulch is forgotten. Lilies should be covered at least four inches in a heavy soil, and from six to eight inches in a light one. I plant my lilies in pure sand, and mulch them after the tops die down with cow manure, over which later on is spread a thick layer of half decayed leaves. The lilies are planted along a shrubbery border, with special "pockets" of sand hollowed out for them here and there. The foliage of the shrubs protects the roots of the lilies, and their buds and flowers here have leaves enough to form a good background. The shrub-roots also drain the soil all that is necessary.

L. GREENLEE.

Garden City, N. C.

\* \*

#### FROM LARGE TO SMALL.

I HAD the delightful space of half an acre for my flower garden, and had taken care of it from the first, for the new house was built in a field. Every tree, shrub and plant had been cared for by my own hands and they all seemed like old friends. We had to move, and, worse than all, near the center of the city, and standing on the steps of the new house, I surveyed my back yard, and almost tore my hair to see the place twenty feet square, and a big barn that filled in all the rest of the lot. But a garden I must have, and I soon decided it must be an "up" one, for there were walls and fences on all sides, and so began my acquaintance and enthusiasm for vines. The front was brick, and *Ampelopsis Veitchii* was soon clinging hold of the rough places with its funny little fingers; and between the windows was a wire screen with its *Clematis Jackmanni*. A golden-leaved honeysuckle was around the dining-room windows, and it's a shame so few have this pretty vine.

As for the barn, its great ugly walls could hold all sorts of queer, clinging things. I had the gourds in the humorous corner, and their green, fantastic fruit seemed like a broad grin, that nature liked to indulge in. One sunny window I covered with those delicate little children, *momordica*, morning-glories, *thunbergia*, and balloon vines; and I became acquainted with that curious thing, *Cobœa scandens*; the flowers turn from a clear green to a lovely purple, and

leaves, and seeds are very interesting to study. Of course, there was the woodbine, and some climbing roses, and I found I could do much with boxes. One of the prettiest windows was in the barn, with its *cobœas* climbing around, and box of scarlet nasturtiums below the sill.

I found my garden demanded more time, than when composed of a half acre flat space. If there in one thing vines

ness, and the temptation will be strong to declare, "I won't try to have a garden again." But take right hold of the new place, however unpromising. Remember your own health and nerves need the work out doors. Besides, in starting new places there are opportunities to try varieties you are not acquainted with, and so increase your gardening knowledge and skill; afterwards the experience will be



SINGLE HYACINTHS.

King of the Yellows.

Mimosa.

want, and clamor for, its all the room there is. I had to be constantly pruning, cutting, tying up, and training, to keep them in their places. And the window boxes needed constant watering through the dry, hot days. Many will change homes this spring, some going from well-cared for and beautiful back yards to hardly none, or given over to all untidi-

found valuable. I know a lady that has built up a garden in five different places. She says, "It is good missionary work," that many of the back yards she has left, have given the desire to still keep the plants in good order; and again, every spot, large or small, one has made beautiful, helps to make this earth a better place to live in.

SISTER GRACIOUS.





**Hyacinths** are princely flowers.

A dirty flower pot never will do.

For **pæonies**, fall planting is the best.

A few house plants are better than a crowd.

In picking pears be careful not to break the fruit spurs.

Too much as well as too little water, will harm most house plants.

Do not fear planting the hardy bulbs too early. The sooner the better.

Do you enjoy the grotesque in flowers? To mention the Parrot tulips should be enough.

Some do not know perhaps, that daffodils are the perfect plants for the wild garden and grove.

A Paragon chestnut tree planted in our garden eight years ago, has been a steady cropper now for several years.

A successful grower of pansy plants for sale, tells us that she counts on 100,000 plants from a pound of seed.

I set my newly lifted plants in a shady place, and sprinkle the tops lightly every couple hours. In that way they scarcely wilt, which is a great gain.—*M. G. E.*

Set things right now. The spring never comes round, when many amateurs do not blame themselves by saying, "Why didn't we fill these lawn beds with bulbs last fall?"

Our friends write that this MAGAZINE grows in attractions with every month. Thank you, that is what a thrifty plant should do. Now would you speak as kindly to your friends about the journal? Many would be glad to take it at its present low price, if but told of its nature.

**Snowdrops.** One too seldom sees these always welcome spring flowers growing in the lawn. They succeed perfectly in the grass.

It is a dull dealer that does not very soon size up, and pass by, the stock of the grower who slips culls into the inside of the fruit basket.

**Fallen fruit.** Professor Taft makes the reasonable suggestion, that the habit of letting waste fruit lie under the tree to decay is a bad one. In many cases the spores of the rot are carried to the good fruit causing it to decay.

Would you have the secret of growing narcissus to perfection? Plant the bulbs and then leave them alone for years. The clumps are almost as permanent as oak trees. Many an old home site, with its buildings long since

razed from the earth, is marked by clumps of this permanent flower.

**Large trees.** At Greenfield, Mo., there is a monster peach tree. It is the largest of which we have ever heard. The trunk measures four and a half feet around at its smallest part and five feet at the largest. Age is beginning to tell on the tree by shortening its branches but in its prime it spread eighty feet. It bore fruit last year. No one knows how old it is. We would be glad to receive reports from our readers of other unusually large trees.

One of the best investments that the writer made in his garden work, has been the forming of a compost heap in early autumn, consisting of two parts of sod to one part of cow manure, arranging the material in layers. He makes such a heap nearly every year. After the pile

course of teaching agriculture and horticulture in the public schools of Missouri. The plan is that of conducting a summer course at the college in these and allied branches for teachers, principals and superintendents of schools. The course is free of charge. This entire matter is one that recently has been attracting the attention of educators at large, and Missouri has led in the movement. It is one in which the faculty of the college is greatly interested, and thus far the work has been attended with the most gratifying results. It tends to bring the farm into the school and the school into the farm, and thus the work of the latter is dignified and honored as it deserves.

**Picking pears.** The pear is a plant that ripens better off than on the tree. To pick the crop therefore as soon as the seeds are brown

in color, is to secure fruit that will do better in flavor, in appearance and in carrying quality. Some varieties like the Bartlett and particularly the Seckel, ripen fairly well on the tree, but even these are better for picking before the fruit is quite ripe. Indeed, so accommodating is the Bartlett that specimens picked when three-fourths grown, will in a warm place, ripen with a remarkably good flavor, a fact that indicates the great adaptability of this kind for distant shipment. In picking the fruit it is well to go twice over the trees, first gathering the crop on the sunny side of the tree, and some days later that which remains. The room in which pears are ripened should not be excessively dry; if it inclines to be so, the dryness should be overcome by the presence of a pail or two of water in the apartment.

**Why are purchased hyacinth bulbs better?** Persons who raise their own gladiolus, and other summer bulbs, and finding such equal in blooming quality with any they may purchase, sometimes wonder why it is not the same with hyacinths. To answer this query, will at the same time enable us to throw some needed light on the culture of this matchless spring flowering bulb. First of all, we must consider that the hyacinth is a semi-aquatic plant and it is so treated in the nurseries where the



*GALANTHUS NIVALIS.*— $\frac{2}{3}$  Nat. Size.

is laid up it is soaked with water. A month later it is cut down from one end with a sharp spade, and by the next spring there is a pile of dark rich mold, suitable for endless uses as a fertilizer and mulch in general gardening.

**Fall propagation.** September is the month when the florist with his greenhouses sets about in earnest, to prepare all kinds of tender plants from the outdoor stock, and the window gardener cannot do better than to follow example. At this, of all seasons, slips are plentiful, and they will root more readily now than if slipping is deferred until the chilly weather of a month later.

**Horticulture in the schools.** H. J. Waters, of the Agricultural college at Columbia, explains to the *Rural World* about the

bulbs are grown for sale. The soil in which the bulbs are cultivated is a sandy peat in which the water stands at a depth of from one to three feet. Now one might suppose that if the hyacinth is so great a water lover, it is ill suited to ordinary culture. That would be a mistake for this reason: When you plant a hyacinth, almost the entire strength and sustenance of the later growth and bloom is stored up in the bulb itself. This is the reason why it will grow and flower so well in water alone, or under other conditions usually called unfavorable. The secret lies in their having been grown into strong, solid bulbs in the favorable soil of the bulb nurseries. From such bulbs you can always count on the finest of flowers. But in subsequent seasons, the bulbs under or-



dinary conditions, will be much smaller and the product inferior. The lesson in all this is, that in hyacinth culture for bloom, whether in pots or otherwise, the plants should be kept very freely watered. In garden culture from year to year the soil should be very rich, cow manure being the best fertilizer, and the soil be kept quite moist.

#### Home made hand barrows.

On our own place we have found great advantage in the use of two simple barrows like those shown in the cut. They were made on the place, and any one handy with saw and hammer can construct similar ones. The material is inch pine with several strips of band iron for binding. The idea of these barrows is that they are to be used by two persons, and they come in play in many places where a wheelbarrow or a cart is debarred. The upper one is designed for carry produce in baskets, plants in pots, etc. Two men, for instance, can carry eight baskets of peaches, tomatoes and the like with the greatest ease, and there is no danger of jarring or injuring the fruit. In the hands of careful men it can be taken up or down cellar steps in a way that a wheelbarrow does not admit of. The lower barrow shown, is used in carrying soil, manure, pots, roots, etc., into the cellar, the plant houses and similar places. In this the ends slope to admit readily of shovelling soil and the like from the barrow. The cost of either of these barrows is inside of one dollar, not counting the labor, and as there is hardly any wear-out to them, they will pay for themselves over and over again in almost any garden or fruit farm.

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#### WAYSIDE GATHERINGS.

Almost any variety of chrysanthemums can be kept over winter out of doors with the same protection we give our roses. Break off the tops and cover with the litter, leaves, or pine rakings. Kept thus they come out in the spring sturdy and strong and if the fall be late will flower before the hard frost comes.



HYACINTHS AS GROWN IN THE NURSERIES.

All plants are best protected in sand; rich soil can only injure slips and cuttings as they cannot absorb the nourishment and it would be like giving rich food to a

dyspeptic. After roots have been formed and growth begins, richer soil and more water may be given, according to the activity of the plant.

Large pieces of old sod form the very best winter protective material when



GALANTHUS NIVALIS FL. PL.— $\frac{2}{3}$  Nat. Size.

obtainable. These heaped about the roses will protect the most tender from severe freezing, and they come out in the spring in splendid order. It is just as good used about any other half hardy plant.

Soot from the kitchen chimney, especially from a wood fire, is invaluable in cultivation of flowers. Rich in ammonia it stimulates and deepens the color of flowers. Used as an insecticide it is equally effective in destroying and removing the pest on account of the creosote contained in it. Soot from hard coal exclusively is of less value, still it is worth saving.

Amayllis that are slow in blooming may be forced at any time by the application of bottom heat. Set the pots in water hot enough to just bear the hand, in cold weather, and let remain until the moisture appears upon the top of the soil. If the weather be warm have the water only slightly warm. Give this once or twice a week, or when the ground appears dry; the flower stems will soon

appear and the bloom be unusually fine.

If the ground about fruit trees, more especially if in sod, be thoroughly dug up to the depth of seven inches, and scattered with chip-manure, street-gleanings, ashes, lime, old mortar, the waste from the hennery, the scrapings of manure yards and any garbage that may have accumulated near the back-door of the kitchen,—in fact if the ground be completely covered with coal-ashes or the sweepings of blacksmiths' shops (so deep that no grass will grow beneath the tree) the owner will have the pleasure of seeing, the following season, a beautiful crop of luscious fruit on a tree which hitherto may have yielded nothing but knotty, gnarly and unmarketable specimens.

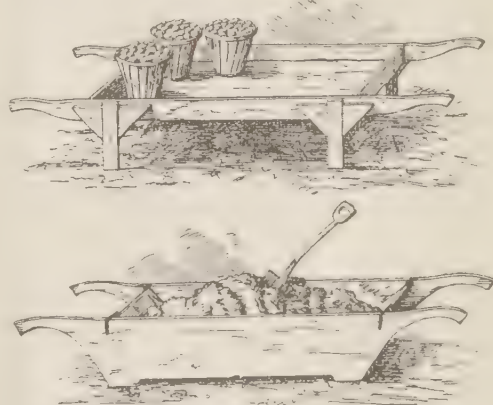
H. K.

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#### EARLY RADISHES.

The *Rural New Yorker* notices the results of a trial of two varieties of radishes; one, a new one, sent out by Thorburn & Co., as the Germanic Forcer, the other the well known white-tipped Early Scarlet. It is claimed that the Germanic "is the earliest, prettiest and best of all the forcing sorts." Unfortunately the test shows otherwise. "The seed was sown May 29th, and the radishes were suitable size for the table June 19th,—21 days. They were of a rich, dark crimson color, twice as long as broad, about one inch long and half an inch in diameter."

On the same day, May 29th, seeds of the white-tipped Early Scarlet were sown. On June 19th, these radishes were at least one-third larger than the Germanic. They vary in shapes from nearly round to oblong. In quality the two varieties are much the same.



TWO FORMS OF HOMEMADE HANDBARROWS.





ROCHESTER, N. Y., SEPTEMBER, 1897.

Entered in the Post Office at Rochester, N. Y., as second class mail matter.

CHARLES W. SEELYE, Editor.

ELIAS A. LONG, Associate,  
(formerly conductor of *Popular Gardening*).

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#### Our Magazine.

The present number of this journal has been devoted principally to bulbs in order to give our readers, at this particular time, a great amount of information in regard to bulbs and their culture, as they are about to be engaged more or less with them, during the next few months, in outdoor planting or in starting them in pots inside. The engravings presented are all new, made expressly for this use, and the editorial and contributed articles are wholly reliable, being written by those having practical experience and full knowledge of their subjects. We believe that our efforts to please and to present the public the best garden literature will be appreciated by all those who read this MAGAZINE. We do not think that for all what we publish, everyone of our readers will become an expert gardener, or wholly successful with all plants, for gardening is an art and requires practice and experience, but when one knows what to do, and how to do it, satisfactory results are sure to come to those who are in earnest and determined to succeed. There is not one of our readers who has not access to these pages by asking advice whenever it may be needed, as our Letter Box testifies from month to month, and, moreover, we trust that any conspicuous case, either of success or failure in the garden or with plants will be reported—the cases of success for the encourage-

ment of others, and of failure as warnings. And as frequently as possible we hope that our readers will favor us with photographs of remarkable or fine specimen plants and garden scenes.

\* \*

#### New Hybrid Varieties of Clematis.

The celebrated clematis growers, of England, George Jackman & Son, are now introducing three new hybrid varieties of clematis which they have raised by crossing *Clematis coccinea* with the large-flowered variety, *Star of India*. *The Garden* in noticing them says that here is a "complete break-away from all existing garden varieties. The new race will be useful in gardening as the varieties all have the hardiness and long-flowering character of the parent."

The three varieties are thus described by the originator: Countess of Onslow—A bright violet-purple with a broad band of scarlet down the center of each petal, it is of open bell-shape form, with four to six petals to each flower; very free flowering, quite hardy, and a good climber; the flowers are thick in substance, and will be found very useful for decoration purposes, and when cut will keep fresh in water for several days.

Duchess of York—A delicate and very pleasing shade of pale blush pink, with deeper tinge down the center of each petal, of campanulate form, with four to six petals to each bloom, it is quite hardy, free flowering, and a good climber; useful for cutting.

Duchess of Albany—A beautiful bright pink, deeper down the center, softening down to lilacy pink round the margin; campanulate in shape, quite hardy, free flowering, and a vigorous grower; useful for cutting.

Duchess of Onslow has received a first-class certificate, and each of the others an award of merit from the Royal Horticultural Society.

\* \*

#### Weather and Crops.

In a large part of the country the excessive rains of the last half of the summer have badly damaged some crops. Great losses have been met, especially with wheat. The seed pea crop, which was largely short on account of the drought of spring and early summer, has also suffered severely from the rains. The short supply must materially increase price. There is to be no excessive crop either of apples or potatoes this year, as there was last, but probably enough for all home demand. The peach crop of the Delaware and Maryland Peninsula is only about one-sixth of what it was last year, though there is a fair crop of peaches generally in the northern states. Plums a good crop. In the apple growing regions of Missouri, Eastern Kansas and Northern Arkansas, the apple crop is reported very large and fine. Pears are plentiful in this region. Grapes are generally a full crop.

#### New Bulletins.

The Department of Agriculture at Washington and various experiment stations have been sending out during the spring and early summer some very valuable reports and bulletins. For the interests of our readers, who can obtain these pamphlets by applying for them at the places of publication, we here note the titles of a few of them. From the Department of Agriculture, at Washington, we have received *Farmers' Bulletins*, No. 53 and 54, *How to Grow Mushrooms*, and *Some Common Birds in Their Relation to Agriculture*; also Circular No. 10, *Three New Weeds of the Mustard Family*, and No. 21, *The Strawberry Weevil*.

From the New York Agricultural Experiment Station, Geneva, N. Y., bulletins on the following subjects: *The Pistol-Case-Bearer*; *Gooseberries*; *A Practical Method of Fighting Cut-Worms in Onion Field*; *Treatment of Leaf Spot in Plum and Cherry Orchards*; *Alfalfa*; *The Downy Mildew of the Cucumber*; *Spray Pumps and Spraying*; *Spraying Potatoes*; *Anthraxnose of the Black Raspberry*. Of the above there are also "Popular Editions" and these are what most people will want and should be enquired for when writing.

Cornell University Agricultural Experiment Station has lately sent out the following valuable bulletins: No. 126, *The Currant-Stem Girdler and the Raspberry-Cane Maggot*; No. 127, *A Second Account of Sweet Peas*; No. 128, *A Talk About Dahlias*; also Nos. 131, 132, 133 and 134 which are respectively, *Notes Upon Plums*; *Notes Upon Celery*; *The Army Worm*; and *Strawberries Under Glass*.

From the Agricultural Experiment Station at Durham, N. H., have been received bulletins entitled *The Canker Worm*; and *Fruit and Potato Diseases*.

The Station at Orono, Maine, issues a bulletin on *The Currant Fly*. Experiment Station at Urbana, Ill., sends out bulletin No. 48, *The San Jose Scale in Illinois*. The Agricultural Experiment Station at Baton Rouge, La., publishes a very interesting and instructive bulletin on *Leguminous Root Tubercles*.

The Arizona Station, Tucson, Arizona, issues a pamphlet of 44 pages on *Sugar Beets*. An 80-page pamphlet entitled "Chickens" is sent out by the Station at Morgantown, W. Va. *The Habits and Economic Values of the American Road* is the title of Bulletin No. 46, of the Hatch Experiment Station, Amherst, Mass.

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#### Crimson Rambler Hedge.

The Crimson Rambler has been successfully employed as a hedge plant at Madison, N. J. *The American Florist* publishes the account with an illustration. The hedge is 135 feet long, was planted in May, 1896, and in June, 1897, 6293 clusters of bloom were counted on it. The shoots are tied to a wire support stretched between iron posts.



## Letter Box.

In this department we shall be pleased to answer any questions relating to Flowers, Vegetables and Plants, or to publish the experiences of our readers. EDITOR.

### The Day Lily.

To the enquirer, (page 135), about day lilies, let me say the most luxuriant one I have ever seen, with rich, broad leaves and great abundance of bloom, was not boxed, but simply planted in good soil under the partial shade of a tree. I have never seen one look other than starved and pitiful when exposed to the full power of the sun's rays for any considerable part of the day.

A. B. C.

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### Amaryllis, Empress of India.

During last winter an amaryllis, long watched and cared for, bloomed for the first time. The leaves were unusually strong and graceful, and the stately blossom stalk two feet in height with five very large lilies of dazzling scarlet made a splendid picture which gave delight to many, and lightened the gloom of dull and cloudy days. The plant is well worthy of its royal name, "Empress of India."

A. B. C.

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### Freeseias.

I have obtained the best results from planting freeseias early. I find the record of last year, "potted freeseias September 3rd," had stronger plants and more bloom than ever before. The pots were not put in the dark, but left out doors and brought in when frosty weather was apprehended. Unlike most other bulbs, the freesia improves in culture and window blooming, and by selecting largest bulbs, one is saved the care of small, unprofitable stalks.

A. B. C.

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### "Only a Pansy Blossom."

I enclose a pansy blossom. If it is not wilted too much, please state in the MAGAZINE what variety it is, as I think its coloring is most beautiful, and another season would like to get that particular kind.

Ashland, Me.

Mrs. J. R. E.

As near as can be judged the specimen may be the variety called "Purplish Violet," though the color may have changed some in drying.

++

### Tuberoses Unsatisfactory.

What is the matter with my tuberoses? I purchased a half dozen bulbs in March and put them in pots the last of that month. At this time, July 1st, three months after planting, one of them has thirteen sprouts coming from the sides, two of them have sprouts of an inch long from the center, one just starting, and the others show no signs of life, yet the bulbs are sound.

Hoosic, N. Y.

GEO. J. S.

It must be said that these plants are very unpromising, to say the least. The plants with the numerous sprouts will probably not give a flower spike, nor is there hope that those will which had not started by the first of July. It would have been better if all had been put in the ground the last of May or first of June.

++

### From Another "Parson."

I feel so much indebted to you for the information I get from month to month that I can't help telling you of it. Coming from a garden country in early life, and where every foot of ground is made to produce abundantly, I have never lost my taste for the garden, but must have one always, even in the heart of the city, if it be no more than a 4x6 hotbed or cold frame. I cannot understand why so few, even in a crowded part of the city, avail themselves of this much enjoyment. And as for the indifference of my fellow parsons to the garden, so many of them at any rate, I cannot understand it.

ANOTHER PARSON.

### A Foreign Letter.

I am from that wonderful garden country found among the little islands in the Bay of St. Michael, Northwest coast of France, enjoying a semi-tropical climate owing to the gulf stream flowing among them, together with their sheltered position. Every foot of ground is carefully cultivated; no suitably exposed wall but there is growing against it the pear, or apricot, or peach, not to speak of the grape. The pear especially was cultivated and trained to thrive against a wall—even the side of a house. And it is quite common to see the fuchsia, where the islanders do not begrudge the room for fruit, completely covering the side of the house and encroaching on the roof of the dwelling.

You may think I am dreaming when I say that when a boy I played "hide and seek" under cabbages growing away above my head! A variety is grown there with a very long stalk, I have heard of it nowhere else, and the stalks are prepared and varnished as curiosities for walking-sticks.

G. T. LEB.

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### Asparagus.—Raspberry.—Blackberry.

This is the third summer since I bought the Vick's Mammoth Asparagus, and I have never been able to cut enough to try it. It only came up this spring



GRAPE HYACINTH.

one or two in a place, and I had it manured heavily last fall. I have never put salt on the row but have kept it weeded. Now, I want to know when is the proper time to have the tops cut off. I see in your catalogue spring is the time for sprinkling the bed with salt. I also want to know if it is proper to have the tops of Columbian Raspberry and Rathbun Blackberry cut off, as other kinds. I have seen pictures of the Columbian Raspberry growing so tall that it was necessary to stand on a chair to pick them.

Hatboro, Penn.

MRS. S. H. B.

The tops of the asparagus plant should not be cut away. The Rathbun Blackberry and the Columbian Raspberry can be cut back in the spring at a height of about three feet.

++

### Aster Disease—Fine Cabbage and Tomatoes.

I would like to know, through your MAGAZINE, what causes China asters to die off. The root and heart seem to dry up. They have good soil and plenty of sun and water; would like to know how they should be treated. I have some Danish Ball-head cabbage that is doing well, the stems grow

quite tall, but otherwise it is fine. I sprinkle the plants with soap suds and it seems to be a good fertilizer. Every plant grew. I also have some tomato plants that cannot be beat; they are the Stone tomato and Vick's Early Leader. I think that the Leader "takes the cake." Your MAGAZINE is a great helper to gardeners.

H. W.

Milwaukee, Wis.

A disease affecting aster plants has appeared, in recent years, the cause of which is not really known, although many careful observers have noted the facts in connection with it. The best treatment to observe is to plant asters each year in new ground, not giving them the same place two years in succession. Next, the plants should be well grown and vigorous at the time of planting. The soil where they are set should be rich, and the ground about them should be frequently stirred during the growing season. Everything that is conducive to the strength and vigor of the plants is so much in their favor of repelling the disease. In extreme hot and dry weather mulching is a great benefit. The disease which was unknown until a few years since is supposed by some to be of a fungous nature, and it may be that it will in time disappear as suddenly as it came.

++

### Plants for a Grave.

I would like to ask a little advice through the Letter Box. We have lately been called upon to bear the loss of a dearly loved young daughter. She was a devoted lover of flowers and I wish another spring to plant some about her grave. We wished to have her near us, so made her grave in a little grove of quaking aspens on a high grassy hillside. The soil is called here yellow marl and our single wild pink rose grows there in great profusion as do many others of our native wild flowers. The little grove is almost in a half circle, the ground sloping to east and south and protected on the west side and north by the high rocky hill that rises above it. I have thought the memorial rose would be desirable if it would live over our winters. It seems very hard to get such things through the winter. How many roots would be needed, and could you kindly give explicit directions for care after planting. The wild white clematis grows here in great profusion but there is none near the little grove I mention. Do you think it would do well if transplanted there, and when would be the most favorable time for doing it. We have not been very successful in planting it near the house. I suppose it is too late to do anything with the roses this summer. I find so much that is helpful in your MAGAZINE and like it very much.

MRS. F. B.

Virginia Dale, Colo.

It is probable that the Memorial rose will succeed in the place described. The best time to plant it will be in the spring as soon as frosts are passed. Give a spot of rich ground, and as warm weather comes on mulch it with grass clippings or some short stable manure, and no other care will be required unless a severe drought should occur when it might need one or two thorough soakings of water. The plant requires no training, but should be allowed to run along on the ground. The second and third years it will cover a large space. The wild clematis may be taken up and transplanted in October, and as cold weather comes on give a cov-



ering of fallen leaves to prevent the action of frosts during winter. If not moved at the time mentioned, it may be done early in the spring, or soon after the frosts are gone.

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#### Tuberous Begonias.—Hedge.

I am very much in want of advice about the treatment of tuberous begonias. For several years I have had a bed of about twenty-five plants, of which I am very proud, but just now is my time to boast, for a little later the large, strong plants, full of blossoms and buds will decay just at the surface of the ground, and before I know it, the whole beautiful plant will begin to wither. Then, too, the buds fall badly all through the summer. I should think the trouble came from over-watering, had I not experimented and found this was not the cause. Please tell me what you would recommend for a hedge. We had about decided upon privet as being of the most rapid growth and best adapted to our Illinois climate with its hot, dry summers, but after reading "Some Truths About Hedges" in your July number, feel it may not be as reliable as we had supposed it to be.

Ottawa, Ill.

T. E. H.

Tuberous begonias do not appear to be well adapted for bedding in the open ground anywhere in this country, though no doubt some localities are more favorable than others, and especially some particular situations. In relation to raising this plant in the open air must be considered the following particulars: The exposure to the sun or the amount of shade; the character of the soil; the amount of rainfall; the prevalence and character of the winds; and the equability of the temperature. In regard to all these external influences the tuberous begonia is particularly responsive. It is evident, therefore, that a plant so sensitive cannot be fully depended upon, but must always be regarded with anxiety. But this is not all, for the plants are liable to a fungus which appears as a rust on the stems and under-sides of the leaves, and which checks their growth or completely stops it. This rust is most apt to appear during seasons of drought and when the air is hot and dry, a condition not at all uncommon in this country, and especially away from the seaboard states. Again the health of the plants depends very much on their inherent strength, and if raised from seeds every plant is different in this respect from every other. Plants raised and bloomed under glass might not display a lack of vigor which would quickly appear in the adverse conditions of open air culture.

Excessive heat, and a sudden fall in the temperature, or high winds, if the plants are exposed, are apt to affect the plants injuriously and induce disease. Our experience and observation lead us to conclude that fully satisfactory results are not to be expected in the open air culture of these plants—that shelter and shade especially, with other favorable

conditions, are requisite to the highest success.

If the so-called California privet, *Ligustrum ovalifolium*, is employed for a hedge one need have little fear of its failure, as it is quite a robust species. The Japan quince is quite a model hedge plant. The buckthorn, *Rhamnus cathartica*, is an excellent plant for a farm hedge.

\* \*

#### IXIA AND SPARAXIS.

THESE bulbs are as yet strangers to many who annually plant a fine variety of bulbs for winter blooming. Like the lovely freesias, however, their charming beauty has already proven a strong bid for popularity, and they are destined soon to become as well known as a hyacinth or tulip, at least to those who love and notice flowers.



SCILLA SIBERICA— $\frac{2}{3}$  Natural Size.

There are several fine varieties of both the ixias and sparaxis. Of the former, a dwarf variety, called *crateroides*, is said to be the best of all for winter blooming, and blooms very early in January and February; the spikes of flowers being very showy and beautiful. A double rose-flowered variety is also lovely, as is also a fine white with blue eye. Unless one only wants one or two pots of them, however, a greater variety of coloring will be obtained by purchasing a dozen or two of the mixed bulbs when many lovely shades and variegations may be obtained.

The sparaxis is much like the ixia except that its flower-spikes droop, whilst those of the ixia stand erect. The blossoms are large and opened flat, and come in many odd and exquisite color variega-

tions. A new variety called Garibaldi is said to produce flowers of enormous size, and to be most gloriously colored. Crimson, yellow, salmon, maroon, purple, blue, white, etc., in the richest shades and most perfect combinations, may all be found in the flowers of this fine bulb.

For pot culture in the house there are few more beautiful or satisfactory bloomers than these.

Ixias and sparaxis require the same culture, and may be planted in October or November, or December, if desired, to have a succession of the exquisite and brilliant blossom throughout the winter. Rich sandy loam seems well-suited to their necessities; plant six or eight of these in a five-inch pot, placing them one inch deep, pressing the soil firmly over the bulbs. Put away to form roots in a

cool dark place and water very sparingly (only sufficient to keep the soil from drying too much,) until the flower-spikes appear.

They may then be brought into the light and will do superbly if given plenty of fresh air, sunshine and water. MRS. S. H. SNIDER.

\* \*

#### WORTHLESS LAND.

Much worthless land has been reclaimed by drainage that is now most productive and valuable. There is very little land in this country that may not be materially improved by tile draining. Much land that is not naturally wet is slow to dry out in the spring. Tile it; it will advance the season at least two weeks, and often more than that. Land is improved by the admission of air. There is no better way of admitting it than by the underdrain, which, when it has carried off all surplus water, carries back to the earth a current of warm air—ideal treatment for cold, clammy soils. There are thousands of cases in which the first crop from a bit of swamp or wet land has paid the entire expense of draining. The most durable, effective and cheapest material in the long run is tile.

The laying of tile drains is a work that can be done much or little at a time, and when other work is not pressing.

## Indigestion Cured

Can Eat Anything She Wishes Since Taking Hood's.

"My wife has been troubled with indigestion and had to be very careful about eating. At times she was not able to do anything. She has taken a few bottles of Hood's Sarsaparilla and can now eat anything she wishes. She is in better health than for four years." C. H. RYDER, Box 478, Groton, N. Y. Remember

### Hood's Sarsaparilla

Is the best—in fact, the One True Blood Purifier

Hood's Pills cure all liver ills. 25 cents.



A SPECIAL HYACINTH COLLECTION.

LAST season I followed my usual plan of buying the mixed unnamed hyacinths for winter blooming, having proved to my satisfaction that they do



SCILLA CAMPANULATA—½ Natural Size.

well for that purpose. However, when making out a later order, I noticed the special collection of single hyacinths recommended for home culture. It was Number 5, and contained six named bulbs: Alba superbissima, pure white; Baron von Tuyl, dark blue; Charles Dickens, porcelain blue; Norma, pink; Gigantea, flesh color, and Robert Steiger, red.

By some oversight they were not planted until about Thanksgiving, and as I have always recommended early planting and practiced what I preached, I thought probably they would not do very well. They were all placed in one pot, a ten-inch one, and all were in blossom at the same time, making the loveliest sight I ever saw.

Gigantea, which by the way is well named, was the latest to bloom, coming into blossom when the others were at their best. It had as large a spike as any three of the others, being almost a monstrosity, and was the wonder of the neighborhood. The stem was as large in

diameter as my third finger and the florets perfectly immense for hyacinths.

The collection had evidently been selected very carefully to give the best results, as all were extra large bulbs, while in color the flowers showed as great

a contrast as could be found in six plants of any kind. All were tall growing varieties and several of the bulbs were strong enough to give two spikes of flowers. I was more than pleased with them and shall try the same collection again this season.

Those who for any reason fail to get their bulbs planted at the proper season, need not be afraid to plant them late, as I have demonstrated the fact that late planted ones do well, especially when such fine, healthy bulbs are used. Z.

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THE editor of the *American Monthly Review of Reviews*, in his department entitled "The Progress of the World," discusses harvest and trade prospects, the new tariff, the coal strike, American annexation policies, our diplomacy on the seal question, Japan and Hawaii, British interests in Canada, European politics and many other timely topics. In connection with matters on the Klondyke gold fields an excellent map of Alaska is published. In the same department appears interesting views of important British colonial capitols.

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Page Never Needs It.

Gentlemen:—When driving lately, I have noticed a neighbor repairing his fences. One day he was working on one made of ribbon wire with a plank on top. At another time on one made of barb and plank at top. I stopped and asked him if he had repaired that fence, pointing to about eighty rods of Page that had been up four years or more. He said, "What fence, the Page?" I said "Yes." He replied, "No, indeed! That never needs any, and I only wish my landlord would put it all over the farm, as it would save me much work that I have to do every spring." I told him I was glad I did not have any fence repairing, as my whole farm was enclosed and fields divided with Page, and as I use nothing but red cedar and locust for posts, think it will be a long while before they will need replacing. I have no trouble to find my stock when turned out, as they are always in their place. Until I had all Page I had much trouble to keep mine home and others out. HENRY RIEMAN, Tunis Mills, Md.

CLUBBING LIST.

We will furnish VICKS ILLUSTRATED MONTHLY MAGAZINE and any of the following publications for the price set opposite the name, which is the regular yearly subscription. Really you receive two publications for the price of one. If you do not see the name of your favorite paper write us regarding same, or send the regular price for the desired paper or magazine, and no doubt we can fill your order for that amount. No premium will be given with these clubbing rates. When more than one paper is wanted deduct 20 cents from the price for each paper ordered after the first; for instance, for VICKS MAGAZINE and *Homestead*, of Iowa, send \$1, and if *Golden Rule*, of Boston, is also wanted, send in addition to the \$1 for *Homestead* only, \$1.80 more,—or \$2.80 in all for VICKS MAGAZINE, *Homestead* and *Golden Rule*; should *Harper's Magazine* also be wanted, then to the \$2.80 add \$3.80 more, making \$6.60 for the four publications.

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VICK PUBLISHING CO.,  
ROCHESTER, N. Y.



# Choice Bulbs for Fall Planting.

For full description of varieties in this list and other Plants and Bulbs, see Vick's Autumn Catalogue of Bulbs.

All Bulbs quoted by dozen or less are mailed postpaid.

Not less than six Bulbs at dozen rates, nor less than twenty-five at the 100 price.

## HYACINTHS.

The following list embraces the best and most popular sorts. They are selected especially for our sales and are the best ever offered in this market. The prices are as low as first-class bulbs can be furnished.

### DOUBLE BLUE.

**Dark Blue**—Bride of Lammermoor, King of Wurttemberg; 10 cents each, \$1.10 per dozen.

**Deep Blue**—Charles Dickens, Garrick, Mignon de Drijfhout, Murillo; 10 cents each, \$1.10 per dozen.  
Carl, Crown Prince of Sweden; 12 cents each, \$1.25 per dozen.

**Light Blue**—A la Mode, Bloksberg; 12 cents each, \$1.25 per dozen.  
Pasquin, Richard Steele; 10 cents each, \$1 per doz.  
Comte de St. Priest; 15 cents each, \$1.50 per dozen.

One each of the above twelve for \$1.20.

### DOUBLE WHITE.

**Pure White**—Duchesse de Bedford, La Deesse, La Tour de Auvergne, Nanette, Non Plus Ultra, Prince of Waterloo, Sceptre d'Or; each 12 cents, \$1.25 per dozen.

**Rosy white**—Anna Maria, Jenny Lind, Miss Kitty, Triumph Blandine, Venus; 12 cents each, \$1.25 per dozen.

One each of the above twelve for \$1.30.

### DOUBLE RED AND ROSE.

Bouquet Tendre, Czar Nicholas, Grootvorst, L'Esperance, Noble par Merite, Panorama, Sir Walter Scott; 10 cents each, \$1.10 per dozen.

Alida Catharina, Bouquet Royal, Goethe, Queen Victoria; 12 cents each, \$1.25 per dozen.  
Lord Wellington; 15 cents each, \$1.50 per dozen.

One each of above twelve for \$1.20.

### DOUBLE YELLOW.

General Kohler, Goethe, Piet Hein; 12 cents each, \$1.25 per dozen.

### SINGLE BLUE.

**Very dark**—Lord Melville, Mimosa, Uncle Tom; 10 cents each, \$1 per dozen.

**Deep Blue**—Baron van Tuyl, Charles Dickens, Pieneman; 10 cents each, \$1 per dozen.

**Light Blue**—Emilius, La Precieuse, Leonidas, Regulus; 10 cents each, \$1 per dozen.

One each of the above ten for 90 cents.

### SINGLE RED AND ROSE.

**Deep Red**—Amy, Eldorado, L'Adorable, Madam Hodson, Queen Victoria Alexandrina, Robert Steiger, Veronica; 10 cents each, \$1 per dozen.

**Rose and Pink**—Baron van Tuyl, Cosmos, Gertrude, Gigantea, Jenny Lind, L'Ami du Cœur, Maria Theresa, Norma; 10 cents each, \$1.10 per dozen.

One each of the above fifteen for \$1.35.

### SINGLE WHITE.

**Pure White**—Alba superbissima (Theba), Baroness van Tuyl, Grande Vedette, LaBelle Blanchisseuse, Maid of Orleans, Queen Victoria; 10 cents each, \$1 per dozen.

**Rosy White**—Anna Paulowna, Cleopatra, Voltaire, Grandeur a Merveille; 10 cts. each, \$1 per doz.

One each of the above ten for 90 cents.

### SINGLE MAUVE OR PURPLE.

Haydn, Jeschko, L'Ami du Cœur, L'Unique; 12 cents each, \$1.25 per dozen.

### SINGLE YELLOW.

Adonia, Fleur d'Or, La Pluie d'Or; 10 cents each, \$1 per dozen.

**COLLECTION No. 5** contains the following choice named bulbs for inside or house culture:

Alba superbissima pure white, Baron van Tuyl dark blue, Charles Dickens bright porcelain, Norma pink, Gigantea bluish pink, Robert Steiger deep red. Sent postpaid for 50 cents.

**COLLECTION No. 6** for outside or garden culture: Bloksburg bright porcelain striped, Bouquet Tendre rose, Bride of Lammermoor dark blue, Grootvorst fine bluish pink, King of Wurtemberg dark blue, La Tour d'Auvergne pure white. Sent postpaid for 50 cents.

No. 5 and 6 Collection to one address for 90 cents.

### BANNER COLLECTION.

One dozen of the very choicest varieties of Hyacinth for pot or glass culture. The finest ever offered. Sent postpaid for \$2.00.

### UNNAMED HYACINTHS.

Double blue, White, and Red; Single Blue, White, and Red; 6 cents each, 65 cents per dozen, postpaid. \$3.50 per hundred, by express, not paid; if wished by mail add one cent per bulb.

## TULIPS.

This season we have made a great reduction in the price of Tulips.

### NAMED SINGLE EARLY.

Bacchus, deep crimson . . . . .	three for 10 c.	\$0 25
Belle Alliance, scarlet . . . . .	" "	30
Chrysolora, yellow . . . . .	" "	35
Cottage Maid, rose and white . . . . .	each 5 c.	40
Couleur Cardinal, brilliant red . . . . .	three for 10 c.	30
Duchess de Parma, red edged with yellow, two for 5 c.		25
Joost van Vondel, red and white . . . . .	three for 10 c.	35
Keizer Kroon, yellow and red . . . . .	" "	35
L'Immaculæ, pure white . . . . .	" "	30
Lac van Rijn, purple and white . . . . .	" "	30
La Reine, rosy white . . . . .	two for 5 c.	25
Pax Alba, very fine white . . . . .	three for 10 c.	30
Pottebakker, white . . . . .	each 5 c.	40
Pottebakker, yellow . . . . .	" "	45
Pottebakker, scarlet . . . . .	three for 10 c.	30
Purple Crown, purplish crimson . . . . .	" "	30
Rose Gris d'lin, pink and white . . . . .	each 5 c.	45
Standard Royal, red and gold . . . . .	" "	50
Standard Royal, white and red striped . . . . .	three for 10 c.	35
Thomas Moore, orange . . . . .	each 5 c.	45
Wouverman, dark violet . . . . .	two for 5 c.	25
Yellow Prince, fine yellow . . . . .	three for 10 c.	35

One each of the above twenty-two for 95 cents.

### SINGLE EARLY DUC VAN THOL.

Red and yellow, Scarlet, Crimson, and Gold Striped . . . . .	two for 5 c.	25
Rose, Yellow, White (true) . . . . .	three for 10 c.	35

One each of the above seven for 20 cents.

### MIXED SINGLE EARLY.

We take special care to have our mixtures of Tulips made for striking effect by mixing all possible colors and varieties together.

Extra Superfine mixed . . . . .	three for 10 c.	25
First Quality, mixed . . . . .	two for 5 c.	20

### NAMED DOUBLE TULIPS.

Blue Flag, fine blue . . . . .	three for 10 c.	30
Duc van Thol, yellow and red . . . . .	two for 5 c.	25
Duke of York, cherry and white three for 10 c.		30
La Candeur, white, fine . . . . .	two for 5 c.	25
Le Blason, rose and white . . . . .	each 5 c.	45
Murillo, pink and white . . . . .	" "	45
Pæony Rose, scarlet; late . . . . .	three for 10 c.	30
Purple, white bordered; early . . . . .	" "	20
Rex Rubrorum, scarlet; early . . . . .	each 5 c.	45
Rose Blanche, pure white, early; three for 10 c.		35
Yellow Rose, pure yellow; late . . . . .	" "	30

One each of the above eleven for 50 cents.

### DOUBLE TOURNESOL.

Orange and red . . . . .	each 5 c.	40
Yellow, true, fine . . . . .	each 6 c.	65

### MIXED DOUBLE TULIPS.

Extra Superfine mixture . . . . .	three for 10 c.	30
First Quality mixture . . . . .	two for 5 c.	20

### PARROT TULIPS.

Admiral de Constantinople dark red, Cafe Brun rich brown, Lutea Major yellow, Perfecta red striped . . . . .	each 5 c.	40
Mixed Parrot Tulips, fine . . . . .	three for 10 c.	35

### LATE FLOWERING, OR SHOW TULIPS.

Bizarres, yellow ground, Roses, Violets, and all varieties mixed . . . . .	three for 10 c.	30
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### MISCELLANEOUS TULIPS.

Gesneriana, brilliant scarlet . . . . .	each 5 c. or three for 10 c.	30
Persica, dwarf yellow . . . . .	each 5 c.	50
Darwin, superfine mixed . . . . .	three for 10 c.	35

### SINGLE EARLY BEDDING TULIPS.

These colors have been selected especially for bedding purposes and will give best of satisfaction. At dozen prices we prepay postage; add 40 cents per 100 if wanted by mail.

Yellow . . . . .	35	1 75
White . . . . .	30	1 50
Red . . . . .	30	1 50

## ANEMONE.

Single white, Bride . . . . .	three for 10 c.	35	1 50
Single, best mixed colors, two for 5 c.		20	1 00
Double . . . . .	three for 10 c.	30	1 50
Single Scarlet . . . . .	two for 5 c.	25	1 25
Double Scarlet . . . . .	three for 10 c.	35	1 50

## NARCISSUS.

### POLYANTHUS NARCISSUS.

Double Roman, white and yellow; Gloriosa, white, orange cup; Grand Monarque, white, yellow cup; Grand Primo White; Grand Primo Yellow; Grand Soliel d'Or, bright yellow, deep orange cup; Grootvorst, white; Jaune Supreme, yellow; Her Majesty, white; Luna, white; Newton, yellow and orange; Queen Victoria, white, yellow cup; Staat-en General, lemon; Paper White, new large flowering; 5 cents each, 55 cents per dozen.

One each of the above fourteen for 60 cents.

All colors mixed; three for 12 cents, 40 cents per doz.

### DOUBLE NARCISSUS.

Albo pleno odorato, white . . . . .	three for 10 c.	30
Incomparable, light yellow . . . . .	" "	30
Orange Phoenix, orange and lemon . . . . .	each 5 c.	50
Silver Crown, very delicate . . . . .	each 15 c.	1 50
Tratus Cantus, new, fine . . . . .	each 10 c.	1 00
Van Sion, the well-known Double Yellow Daffodil; Dutch grown bulbs . . . . .	three for 12 c.	40

One each of the above six for 35 cents.

### SINGLE NARCISSUS.

Ard Righ, or Irish King . . . . .	each 10 c.	1 00
Etoile d'Or . . . . .	three for 10 c.	30
Horsfieldi, "Queen of Daffodils" . . . . .	each 10 c.	1 00
Bulbocodium, or Hoop Petticoat, rich golden yellow . . . . .	each 8 c.	75
Golden Spur, golden trumpet . . . . .	each 10 c.	1 00
Leedsii, pure white, star-shaped, three for 10 c.		35
Obvallaris or Tenby Daffodil . . . . .	each 5 c.	50
Poeticus, "Pheasant's Eye" . . . . .	two for 5 c.	20
Poeticus ornatus . . . . .	three for 10 c.	30
Princeps, a true bicolor . . . . .	each 5 c.	45
Sir Watkin, Giant Chalice Flower . . . . .	each 15 c.	1 25
Trumpet Major (Single Daffodil), deep golden yellow . . . . .	three for 12 c.	40

One each of the above twelve for 75 cents.

## CHINESE SACRED LILY.

Joss Flower. Special Chinese grown bulbs; each 15 cent, three for 40 cents, \$1.50 per dozen.

## JONQUIL.

	DOZ.	PER 100
Largest double, sweet . . . . .	each 5 c.	55
Single, sweet . . . . .	two for 5 c.	20
Campernel (Great Jonquil), yellow, fragrant . . . . .	three for 10 c.	30
		1 25

## CROCUS.

### EXTRA LARGE NAMED BULBS.

Baron von Brunow, blue; David Rizzio, purple; La Majestuese, white, violet striped; Madam Mina, violet and white striped; Mont Blanc, pure white; Non Plus Ultra, blue, white bordered; Princess of Wales, soft velvety purple; Queen Victoria, pure white; President Grant, blue, white striped; Sir Walter Scott, variegated; Cloth of Gold; Cloth of Silver; two for 5 cents, 20 cents per dozen, \$1 per hundred.

### MIXED BULBS.

Large Blue, White, Striped, Yellow; 10 cents per dozen, 65 cents per hundred. All colors mixed, 10 cts. per doz., 60 cts. per hundred.

## LILIES.

	EACH	DOZ.
Lilium auratum, home grown . . . . .	20	2 00
auratum, Japan grown, ready Nov. 1 . . . . .	15	1 50
candidum . . . . .	10	1 00
Croceum . . . . .	15	1 50
Harrisii, extra strong, 7 to 9 in. . . . .	15	1 50
Japonicum longiflorum . . . . .	15	1 50
lancifolium (speciosum) Præcox . . . . .	20	1 75
" " rubrum . . . . .	20	1 75
pardalinum . . . . .	20	2 00
tenuifolium . . . . .	25	2 50
Thunbergianum grandiflorum . . . . .	15	1 50
tigrinum splendens . . . . .	15	1 50
tigrinum fl. pl. . . . .	15	1 50

### CALLA LILIES—Dry Bulbs.

Large bulbs, 1st size . . . . .	20	2 00
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### LILY OF THE VALLEY.

First-class in all respects . . . . .	05	55
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## FREESIAS.

Choice bulbs . two for 5 c. 25 c. per doz. \$1.00 per 100  
Monster " . each 5 c. 40 c. " 1.25 "

## TUBEROSE.

New Dwarf Pearl . each 8 c. three for 20 c. doz. 60 c.